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16. ABSTRACT

When dealing with atmospheric pollution, it is necessary for state and local air pollution control agencies to amass, catalogue, sort, evaluate, and perform calculations upon large volumes of data. EPA has developed and provided computer subsystems to state and local air pollution control agencies which assist them in these areas. These subsystems come under the umbrella system known as the Comprehensive Data Handling System (CDHS). The CDHS subsystems are supported by EPA after being installed by users. These support activities addressed in this report are: (1) establishment of CDHS user groups, (2) conducting CDHS requirement surveys, (3) update distribution mechanisms, (4) documentation of user hardware/software configurations, (5) procedures for responding to user identified subsystem problems, (6) methods of communicating with users.

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COMPILATION OF CDHS STATE ASSISTANCE REPORTS

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

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COMPILATION
OF
CDHS STATE ASSISTANCE REPORTS

by

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INTRODUCTION

1.0 Overview

This task was initiated on June 23, 1975 with the following objectives:

1. Prepare a report analyzing the best method for establishing CDHS user groups. Considering those installations currently existing and those which are pending; whether or not the control agency has more than one CDHS subsystem and whether the same agency personnel are involved in both; the desirability of having central user group meetings or whether it will be necessary to have them on a Regional basis; the organization, content, and management of these meetings.
2. Prepare a report analyzing the most desirable, efficient, and practical approach to conducting CDHS user requirements surveys.
3. Prepare a report outlining the most desirable scheme for distributing CDHS subsystem updates to the user community. This distribution scheme shall consider the types of hardware each user is operating on.
4. Prepare a report documenting the hardware/software configurations, special characteristics, and any unusual local conventions for each CDHS installation site.
5. Prepare a report analyzing the most responsive and efficient procedures for responding to user identified subsystem problems.

These reports are presented in chapters two through six of this report. The task was then modified to include these additional objectives:

1. Publish the CDHS User's Bulletin.
2. Conduct CDHS users group meetings in EPA regions where requested.
3. Distribute the official CDHS subsystem updates.
4. Develop and implement procedures for distributing initial subsystem software.

In accomplishing item one of the additional tasks, RTI developed the format of the current CDHS USERS BULLETIN and, using that format, wrote,

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published, and distributed eight bulletins. Under item two of the additional tasks, RTI conducted user group meetings in Florida, Georgia, Ohio, South Carolina, Virginia, and California. Under item three, RTI used the techniques developed in the original scope of work to distribute twenty-one (21) updates to EIS/P&R and twenty (20) to AQDHS-II. In accomplishing item four, RTI (in conjunction with NADB) developed the system for distributing initial CDHS software and, using this system, provided eighteen (18) copies of EIS/P&R and nineteen (19) copies of AQDHS-II.

ESTABLISHMENT OF CDHS USER GROUPS

2.0 Background

The EPA has ten (10) Regional Offices with responsibility for implementation of EPA environmental policies and programs, and for maintaining liaison with and providing assistance to state and local environmental agencies within the geographical area of each Region. The staff of each Regional Office includes an Air Programs Office, with responsibility for air quality programs initiated or sponsored by the federal government. This staff should be knowledgeable of the status of its state and local CDHS user programs.

Nationally, there are 54 CDHS subsystems installed, being installed, or planned, with at least one site in each of the ten EPA Regions. Figure 2.1 lists these sites by Region, showing the status of each AQDHS-II and EIS/P&R installation.

2.1 Recommendations and Suggestions

User group meetings provide an excellent forum for exchange of CDHS information between EPA offices and the users. Such groups could be established on a program basis, a hardware basis, or a geographical basis. Restrictions on out-of-state travel limit some users to attending meetings only within their geographic area. Within each EPA Region (except Region 6), there are installations which have both the AQDHS-II and the EIS/P&R subsystems. User groups based on subsystems would require these users to attend two sets of meetings. Most installations use IBM-370 hardware, with the remainder having a wide variety of different vendor's computers; consequently, hardware would not seem to be a valid basis for grouping.

Therefore, it is recommended that the users groups be established based on the ten (10) EPA Regions. Since there is a wide variance among the Regions as to the status of the CDHS user programs, each Region should structure its group for its individual needs. The Regional Offices should be designated as points-of-contact for the CDHS user groups. They can, in addition, serve as liaison between NADB and the users. It is recommended that each Regional users group schedule a yearly users meeting. In addition to this scheduled meeting, meetings should be held as needed on a local, state, Regional, or National basis.

Figure 2.1 CDHS USER LISTING

	User Hardware	AQDHS-II	Update Status	EIS/P&R	Update Status
Region I					
CONN	IBM-370/168	Installed	17		
MASS	CDC CYBER 72	In Progress		In Progress(1)	
NH	HONEYWELL	Installed			
RI	AMDAHL 470 V/6	Installed	14		
MAINE	HONEYWELL 6000	In Progress			
Region II					
NY City	IBM-370	Installed			
Puerto Rico	IBM-370	Installed	16	Installed	18
Region III					
DEL	IBM-360/50			Installed	19
VA	IBM-370/158	Installed	19	Installed	21
Fairfax Co., VA.	IBM-370/155.2	Installed		Installed	
Region IV					
ALA	UNIVAC-1100/10	Installed			
FLA	UNIVAC 1100/40	Installed	20		
GA	UNIVAC-1110	Installed		Installed	
KY	IBM-370			Installed	10
MISS	IBM-370/155			Installed	21
NC	IBM-370			Installed	
SC	IBM-370	Installed		Installed	
TENN	IBM-370	Installed		Installed	
Region V					
ILL	IBM-370/168	Installed			
IND	IBM-370/165	Installed	18	Installed	20
MINN	CONTROL DATA 3300			Installed	20
OHIO	IBM-370/158	Installed	18		

Figure 2.1 CDHS USER LISTING (Continued)

	User Hardware	AQDHS-II	Update Status	EIS/P&R	Update Status
Region VI					
OKLA	IBM-370	Installed	17		
NM	IBM-370	Installed			
Region VII					
IOWA	IBM-370/158	Installed			
MO	IBM-370/158 & 145	Installed	14	Installed	16
Region VIII					
COLO	IBM-370/145	Installed	17	Installed	19
ND	IBM-370/145	Installed	19	Installed	21
MONT	IBM-370/145			Installed	21
WYOMING	IBM-370	Installed	18		
UTAH	ITEL	In Progress			
Region IX					
ARIZ	HONEYWELL 6060			Installed	19
PIMA CO., ARIZ	IBM-370/145	Installed	14		
CALIF	IBM-370/168	Installed	13	Installed	15
LA CO., CALIF.	IBM-370			Installed	
VENTURA CO., CALIF.	IBM-370/145			Installed	
SAN DIEGO CO., CALIF.	IBM-370/158 & 145			Installed	21
NEVADA	INFONET/UNIVAC-1108 MAINFRAME	Installed	13		
FRESNO CO., CALIF.	IBM-370/145			Installed	21
SANTA BARBARA CO., CALIF.	IBM-370			Installed	

Figure 2.1 CDHS USER LISTING (Continued)

	User Hardware	AQDHS-II	Update Status	EIS/P&R	Update Status
Region X					
ALASKA	IBM-370/148	In Progress		Installed	
Number Installed		25		24	
Number In Progress		4		1	
TOTAL		29		25	

(1) This installation is being converted from an IBM to a CDC Computer.

OTHER US GOVERNMENT AGENCY USERS

	User Hardware	AQDHS-II	Update Status	EIS/P&R	Update Status
U. S. Army	IBM-360/65			Installed	19
U. S. Navy	IBM-370				

FOREIGN USERS

AQDHS-II	EIS/P&R
Australia	Rio De Janerio, Brazil
Rio De Janerio, Brazil	Sao Paulo, Brazil
	Canada
	Israel

USER REQUIREMENT SURVEYS

3.0 Introduction

In order to provide the CDHS User with subsystems which are responsive to their specific requirements, a mechanism should be established for continually obtaining the requirements of each user. The establishment of this mechanism will provide EPA with the feedback and input which is necessary in developing immediate and long term plans for each of the CDHS subsystems. RTI recommends that the approach used to obtain the requirements of each user be similar to the approach implemented during this effort. This approach is discussed in the following section.

3.1 Approach Used To Obtain User Requirements

The approach which RTI employed to obtain the CDHS user requirements was direct communication with the user followed by a written summary of the discussion. This appears to be the best approach to the problem of obtaining the needs of each user. This direct communication with the user can be accomplished by telephone conversations or by scheduling time for a discussion of user needs at each CDHS User's meeting, thus allowing the user the opportunity to prepare a list of his requirements for presentation at the CDHS User's Meeting. Also, this discussion period at the User's Meeting can be used by EPA personnel to thoroughly discuss any modifications which are being made to the subsystem.

3.2 Suggested Modifications

In this section, the modifications suggested by the CDHS User Community and RTI are briefly discussed by subsystem.

3.2.1 EIS/P&R Modifications

3.2.1.1 Non-Standard Retrieval Modification

The current EIS/P&R retrieval package always produces an answer file in master file format; that is, if a segment 2 record qualifies for retrieval, then segments 0 and 1 would also be written to the answer file. The proposed modification would give the user the option to retrieve only those segments specified in the retrieval.

3.2.1.2 Batched Retrievals

The current retrieval package provides the user with one retrieval request per run. This means that if a user has more than one retrieval request, he must make separate computer runs for each retrieval request. This procedure is very costly and time-consuming since the entire EIS/P&R master file must be passed for each retrieval request (this is due to the sequential nature of the EIS/P&R master file), thus, a modification to provide the capability of batched retrieval requests would greatly benefit the EIS/P&R user.

3.2.1.3 Retrieval of Segment 3 Records

Currently, the EIS/P&R retrieval package will allow the user to retrieve segment 3 records only if he specifies segment 3 information in his retrieval request; thus, a modification which would allow the user to retrieve all information concerning a particular plant, point, or machine process would be beneficial.

3.2.1.4 Additional Conversion Programs

Since the EIS/P&R data base contains a great deal of information useful in various modeling programs, it would be beneficial to provide conversion programs which would convert the information contained in the EIS/P&R data base to formats compatible with various modeling programs. Some candidate conversion programs would be: a) EIS/P&R to IPP; b) EIS/P&R to AQDM; c) EIS/P&R to HIWAY and d) EIS/P&R to CDM.

3.2.1.5 Modification of the Print Programs

Several users have requested that a modification be incorporated into each print program to allow them the capability of generating agency specific information, such as agency name and address, on each page of their report.

3.2.1.6 Modifications to File Maintenance

Several users have suggested that the file maintenance program be modified to allow the user to add a type 13 transaction to an existing point and blank a specific field using a change transaction.

3.2.1.7 New Print Programs

Several users have suggested that EIS/P&R should have several one line exception reports or summary reports, such as an exception report of 100 ton emitters, which the "Quick Look" Program will not produce.

3.2.1.8 Additional Criteria Pollutants

RTI suggests that EIS/P&R be modified to automatically generate reports to EPA for new criteria pollutants. Currently, EIS/P&R generates the NEDS report on the five criteria pollutants identified by EPA, but NEDS only has the capability of tracking these five criteria pollutants. Thus, if a new criteria pollutant (possibly lead) is identified, EPA must either modify NEDS to provide the additional tracking capability or use another data base management system to provide this tracking capability. The HAZARD and TRACE EMISSION SYSTEMS (HATREMS) is a likely candidate for providing the tracking of additional criteria pollutants. Since EIS/P&R presently provides the capability of tracking sixteen (16) pollutants, an EIS/P&R to HATREMS transaction format conversion program could provide the EIS/P&R user the capability of tracking additional criteria pollutants as they are identified.

3.2.1.9 Automatic Semiannual Reporting

EIS/P&R should be modified to handle the new NEDS P7 card and provide the user with the automatic reporting of their semiannual report.

3.2.1.10 Suballocation of Area Sources in EIS/P&R

The area source handling facility should be modified to allow the user to suballocate his area sources, handle the new NEDS A7 card, and provide the user with an automatic reporting feature.

3.2.1.11 Revise the Emission Factor Table Generator

The emission factor table generator program should be rewritten to provide the true file maintenance capability and eliminate the track overflow problem experienced by several IBM users.

3.2.1.12 Modify the Emission Factor Insertion Program

The emission factor insertion program should be modified to allow the user the option of selectively replacing the emission factor related information.

3.2.1.13 Modify the Transaction Generator

The transaction generator program should be modified to produce only change transactions for the automatic update. This would eliminate the problem of deleting machine processes which do not meet the option card criteria. This program should also have the additional capability of generating all of the transactions in a given master file or answer file.

3.2.2 AQDHS-II Modifications

3.2.2.1 Standard Violations

Several users have suggested that additional exception report programs be added to AQDHS-II to provide violation of standards reports on all criteria pollutants.

3.2.2.2 Summary Reports

Several users have indicated that it would be desirable to have additional summary reports in a format specified by the user. A candidate modification to provide this capability would be a "QUICK LOOK" program similiar to that being developed for EIS/P&R.

3.2.2.3 File Maintenance

Several users have complained that when they attempted to change a null reading with a change transaction it was rejected. Thus, a candidate modification to the file maintenance program would provide the capability of changing a null reading to a valid reading, using a change transaction, and setting the status flag to add for later submission to SAROAD.

3.2.2.4 Transaction Edit

In order to provide additional anomaly screening, the data should be compared to the minimum detectable value for that parameter-method code combination. If the data is less than the minimum detectable value, it should be accepted; however, a non-suppressible warning message should be output for that reading.

3.2.2.5 Additional Sort Programs

Presently, the AQDHS-II relies solely on the particular utility sorts provided with the local computer center's operating system. COBOL sort programs should be added to the system to alleviate the problem of varying system sort packages among different hardware vendors. The following is a list of candidate sort programs:

a) Master file transaction sorter
b) File code transaction sorter
c) Parameter code transaction sorter
d) Parameter standards transaction sorter
e) Master file sorter

3.2.2.6 Site Code File

Several users have suggested that the site code file be expanded to include county codes, UTM coordinates, AQCR numbers, calibration dates, city names, county names, site addresses, contact persons, date sampling commenced or terminated, sampling height of the probe or sample inlet, and air pollutants monitored at the station.

3.2.2.7 Parameter Code File

Several users have suggested that the parameter code file be expanded to include a conversion factor to convert the reading for that parameter to standards units.

3.2.2.8 Parameter Standards File

Several users have indicated that the parameter standards file would be better utilized if it contained the standards in a set format, thus allowing the programs used to determine "violations of the standards" to access this file for the standard for that parameter code.

3.2.2.9 Table Maintenance Program

Programs HXTABLE1, HXTABLE2, and HXTABLE3 should be modified to provide a true file maintenance activity using "add," "change," and "delete" transactions. In addition, the minimum delectable value should be removed from the key portion of the parameter code file.

3.2.2.10 Incorporate Several SAROAD Report Programs

AQDHS-II is currently limited in the number of report formats it can generate; thus, RTI suggests that the current SAROAD report formats be examined for possible report formats which can be incorporated into AQDHS-II.

3.2.2.11 Provide the Capability of Automatically Providing the SLAMS Annual Report

Additional programs should be added to the AQDHS-II to provide the user with an easy method of submitting his annual State and Local Air Monitoring Site (SLAMS) reports.

3.2.2.12 Negative Data

Several users have suggested that AQDHS-II would be more useful if it had the capability of processing negative data such as temperatures, dew points, and lapse rates.

3.2.2.13 Anomaly Screening Techniques

Several users and MDAD personnel have suggested that anomaly screening techniques be incorporated in AQDHS-II. This modification would increase the reliability of the data submitted to EPA.

3.2.2.14 Sliding Average Program

Several users have requested that a "wrap-around" capability be incorporated in the current sliding average program.

3.2.3 Documentation

Nearly every user of CDHS has suggested that the User's Guides for EIS/P&R and AQDHS-II be completely rewritten to be more user oriented.

DISTRIBUTION PROCEDURES

4.0 Software and Documentation Distribution

Software and documentation distribution includes both initial distribution of the two CDHS subsystems and Users Guides and updates involving modifications to the subsystems plus any resulting modifications to the Users Guide. The detailed procedures for these distributions follow.

4.1 Introduction

Periodically, a request is submitted to the National Aerometric Data Branch (NADB) for a copy of a subsystem of the Comprehensive Data Handling System (CDHS). The two current subsystems now available are the Air Quality Data Handling Subsystem, version Two (AQDHS-II), and the Emissions Inventory Subsystem with Permits and Registration (EIS/P&R). These subsystems currently reside on a mass storage device on the Washington Computer Center (WCC) IBM 370 computer located in Washington, D.C.

In order to facilitate prompt and efficient response to the requestor, the procedures detailed in the following sections should be implemented as the standard method of distributing initial CDHS subsystem software.

4.1.1 Procedures for Initial Software Distribution

When a requestor contacts NADB for a copy of a CDHS subsystem, his name not only must be added to either the AQDHS-II or the EIS/P&R update distribution list, depending on the subsystem requested, but also must be added to the CDHS Users Bulletin distribution file. (The CDHS Users Bulletin is a publication to inform users of updates which have been performed on each of the subsystems, current and planned modifications, helpful hints to users, etc.) The file containing these distribution lists resides on a mass storage device on EPA's UNIVAC 1110 computer located at Research Triangle Park, North Carolina. When additions, changes, or deletions must be made to these lists, the files are edited using the UNIVAC System EDIT processor. When a change or deletion is to be made, the appropriate name is located in the file and the change or deletion is performed. To add a name, the new name and address are entered in alphabetical order in the file. (See Section 4.3 for further details.) Mailing labels can be produced by executing a standard NADB program (AE001) which uses these card image files as input (Figure 4.1).

External tape labels are assigned to tapes provided by the requestor from the appropriate tape label pool (see Figure 4.2). For initial AQDHS-II subsystem

Figure 4.1

GENERATION OF MAILING LABELS

The following procedures should be followed to obtain mailing address labels from the subsystem distribution file residing on the UNIVAC 1110.

AQDHS-II

```
@RUN       (valid run card)
@ASG,A     CDHS*CDHS-MAIL.
@COPY,S    CDHS*CDHS-MAIL.AQII/NAMES,.AQII/LABELS
@ADD,PL    CDHS*CDHS-MAIL.AQII/MAIL
@FIN
```

EIS/P&R

```
@RUN       (valid run card)
@ASG,A     CDHS*CDHS-MAIL.
@COPY,S    CDHS*CDHS-MAIL.EIS/NAMES,.EIS/LABELS
@CAT,P     PNR-OUT.
@ADD,PL    CDHS*CDHS-MAIL.EIS/MAIL
@FIN
```

Figure 4.2

CDHS TAPE LABELS

TAPE LABEL	USER	TAPE LABEL	USER
AQS010		PNR010	
AQS020		PNR020	
AQS030		PNR030	
AQS040		PNR040	
AQS050		PNR050	
AQS060		PNR060	
AQS070		PNR070	
AQS080		PNR080	
AQS090		PNR090	
AQS100		PNR100	
AQS110		PNR110	
AQS120		PNR120	
AQS130		PNR130	
AQS140		PNR140	
AQS150		PNR150	
AQS160		PNR160	
AQS170		PNR170	
AQS180		PNR180	
AQS190		PNR190	
AQS200		PNR200	
AQS210		PNR210	
AQS220		PNR220	
AQS230		PNR230	
AQS240		PNR240	
AQS250		PNR250	

requests, tape labels include the prefix AQS and three numbers. For initial EIS/P&R subsystem requests, tape labels include the prefix PNR and three numbers. A tape log is maintained which provides information concerning the agency or person to whom the tape is assigned, and the date NADB received the tape from the requestor, etc. (see the hatched portion of Figure 4.3). A cover letter identifying the tape (see Figure 4.4 and 4.5) is prepared and sent with the tape to the EPA tape librarian at the Washington Computer Center (WCC). The date the tape is sent to WCC is recorded in the tape log (see Figure 4.6). For requestor supplied tapes, tape copy decks which will copy the appropriate subsystem have been created with each tape label; e.g., if the tape label is AQS040, then the deck with tape AQS040 already assigned to it will be used to copy the AQDHS-II software or EIS/P&R software (see Figure 4.7 and 4.8).

If the requestor did not supply a tape, a call must be made to the WCC tape librarian in order to reserve one of their tapes. The label for this tape will include the prefix OS and four numbers. This label will be recorded in the tape log along with the date issued (see Figure 4.9).

After the requestor has received the tape and has copied the subsystem from the tape to his system, he will be responsible for returning it to NADB who will then return it to the WCC library. The tape copy deck for a WCC supplied tape must be created using a deck from the preassigned decks as a guide. This is done by copying this file into a temporary file and changing all occurrences of the tape label to correspond to the WCC tape label. The file is then output on cards (Figure 4.10).

The tape copy decks are used to copy the appropriate subsystem onto the requestor's tape. The total process of copying the subsystem includes copying the catalogued procedures, the associated test jobs (including test data), the load module, and the source programs (Figures 4.11 and 4.12). These copy jobs are carefully analyzed to insure a successful copy of the subsystem, the date of the successful copy and the update level included on the tape are recorded on the tape tracking form (Figure 4.13). At this time, WCC is notified by telephone to return the tape to NADB. Upon receipt of the tape, a standard external subsystem label (AQSTAP or PNRTAP, depending on the subsystem requested) is affixed to it and the date of receipt is recorded on the tape tracking form (Figure 4.14).

An installation deck is then created by reproducing the baseline installation deck. A listing of these cards is produced (Figure 4.15) and the standard

Figure 4.3

NADB TAPE INVENTORY FORM

USER IDENTIFICATION

REEL NUMBER(S)

AQS040

(User 007489)

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

8/6/77
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709
CDHS
ACCOUNT CODE

PROJECT CODE

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) AQDHS-II

FILE DESCRIPTION

(QUAL • FILE NAME) System copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII

☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE

☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.4

AQDHS-II Tape Transmittal Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA Tape Librarian
COMNET
5185 MacArthur Blvd., N. W.
Washington, D. C. 20016

Dear Librarian:

Enclosed is a tape to which I plan to copy the Air Quality Data Handling Subsystem (AQDHS-II).

I will be performing this copy by way of an RJE Terminal from Durham, N.C. After I have determined that this copy is successful, I will call you and have you return the tape to me.

This tape belongs to Mr. Larry McMaster, Research Triangle Institute, Research Triangle Park, North Carolina 27709. Since this tape does not belong to me and may have several control numbers, I have attached an additional external label with the Volume Serial Number of AQS040 for my purposes.

I am not sure of the initialization status of this tape. However, I will use bypass label processing, so it may not be necessary to reinitialize the tape.

Should you need to contact me regarding this tape or WCC procedures, my telephone number is (919) 541-5491.

Sincerely yours,

Lloyd M. Hedgepeth
Environmental Engineer
National Air Data Branch (MD14)

Enclosure

Figure 4.5

EIS/P&R Tape Transmittal Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA Tape Librarian
COMNET
5185 MacArthur Blvd., N. W.
Washington, D. C. 20016

Dear Librarian:

Enclosed is a tape to which I plan to copy the Emission Inventory Subsystem/Permits and Registration (EIS/P&R).

I will be performing this copy by way of an RJE Terminal from Durham, N.C. After I have determined that this copy is successful, I will call you and have you return the tape to me.

This tape belongs to Mr. Larry McMaster, Research Triangle Institute, Research Triangle Park, North Carolina 27709. Since this tape does not belong to me and may have several control numbers, I have attached an additional external label with the Volume Serial Number of PNR120 for my purposes.

I am not sure of the initialization status of this tape. However, I will use bypass label processing, so it may not be necessary to reinitialize the tape.

Should you need to contact me regarding this tape or WCC procedures, my telephone number is (919) 541-5491.

Sincerely yours,

Lloyd M. Hedgepeth
Environmental Engineer
National Air Data Branch (MD14)

Enclosure

Figure 4.6

NADB TAPE INVENTORY FORM

USER IDENTIFICATION

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

8/6/77
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709

CDHS
ACCOUNT CODE

PROJECT CODE

REEL NUMBER(S)

AOS040

(user 007489)

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) AODHS-II

FILE DESCRIPTION

(QUAL • FILE NAME) System copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) AODHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

8/7/77 Sent to COMNET

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.7

AQDHS-II Tape Copy JCL

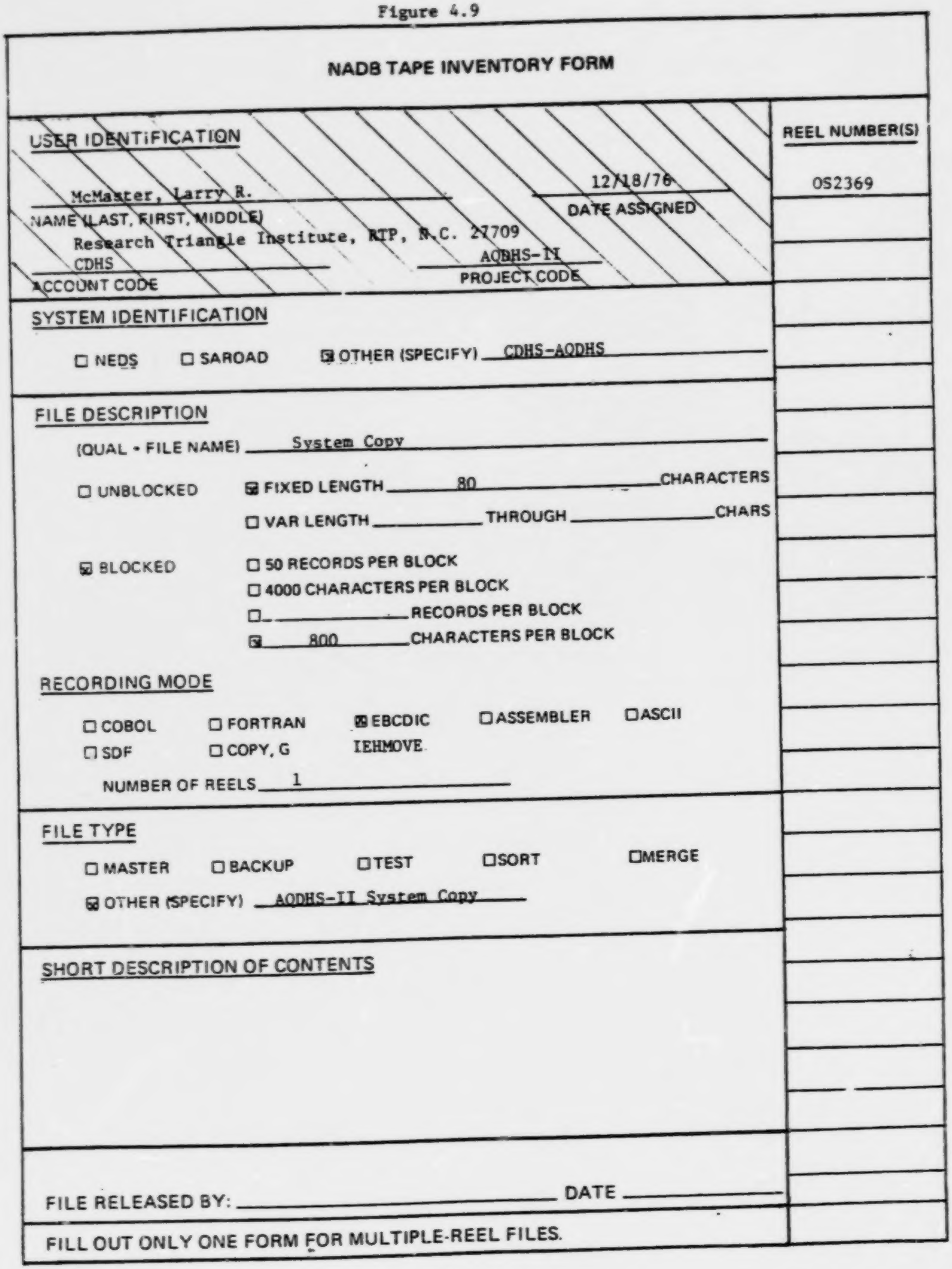
```
//EPALMH  JOB  (A087,LMH,,LMH,,1),TIME=1,PRTY=5
//COPY      EXEC PGM=IEHMOVE,
//              REGION=100K,
//              TIME=(1,0)
//SYSPRINT DD SYSOUT=A
//SYSUT1    DD UNIT=SYSDA,SPACE=(CYL,(10,1))
//DISK1     DD UNIT=3330,
//              VOL=SER=CDHSPK,
//              DISP=OLD
//TAPE      DD UNIT=2400,
//            VOLUME=SER=AQS040,
//            DISP=(NEW,PASS),
//            LABEL=(,BLP),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)
//SYSIN     DD *
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.JCL,                         X
                TODD=TAPE,TO=2400=(AQS040,1),                               X
                RENAME=CDHS.AQS.JCL
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.JOBS,                        X
                TODD=TAPE,TO=2400=(AQS040,2),                               X
                RENAME=CDHS.AQS.JOBS
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.SOURCE,                      X
                TODD=TAPE,TO=2400=(AQS040,3),                               X
                RENAME=CDHS.AQS.SOURCE
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.SYSIN,                       X
                TODD=TAPE,TO=2400=(AQS040,4),                               X
                RENAME=CDHS.AQS.SYSIN
/*
```

Figure 4.8

EIS/P&R Tape Copy JCL

```
//EPALMH  JOB  (A087,LMH,,LMH,,1),TIME=1,PRTY=5
//COPY     EXEC PGM=IEHMOVE,
//            REGION=100K,
//            TIME=(1,0)
//SYSPRINT DD SYSOUT=A
//SYSUT1   DD UNIT=SYSDA,SPACE=(CYL,(10,1))
//DISK1    DD UNIT=3330,
//            VOL=SER=CDHSPK,
//            DISP=OLD
//TAPE     DD UNIT=2400,
//           VOLUME=SER=PNR120,
//           DISP=(NEW,PASS),
//           LABEL=(,BLP),
//           DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)
//SYSIN    DD *
       COPY    PDS=CN.EPALMH.A087.CDHS.HQ.PNR.JCL,                     X
               TODD=TAPE,TO=2400=(PNR120,1),                           X
               RENAME=CDHS.PNR.JCL
       COPY    PDS=CN.EPALMH.A087.CDHS.HQ.PNR.JOBS,                    X
               TODD=TAPE,TO=2400=(PNR120,2),                           X
               RENAME=CDHS.PNR.JOBS
       COPY    PDS=CN.EPALMH.A087.CDHS.HQ.PNR.SOURCE,                  X
               TODD=TAPE,TO=2400=(PNR120,3),                           X
               RENAME=CDHS.PNR.SOURCE
/*
```

Figure 4.9



NADB TAPE INVENTORY FORM

USER IDENTIFICATION

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

12/18/76
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709

CDHS
ACCOUNT CODE

AQDHS-II
PROJECT CODE

REEL NUMBER(S)

OS2369

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) CDHS-AQDHS

FILE DESCRIPTION

(QUAL • FILE NAME) System Copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED ☐ 50 RECORDS PER BLOCK

☐ 4000 CHARACTERS PER BLOCK

☐ ______ RECORDS PER BLOCK

☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII

☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE

☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.10

JCL To Copy AQDHS-II To A Tape Supplied By EPA

```
//EPALMH  JOB   (A087,LMH,,LMH,,1),TIME=1,PRTY=5
//COPY     EXEC PGM=IEHMOVE,
//             REGION=100K,
//             TIME=(1,0)
//SYSPRINT DD SYSOUT=A
//SYSUT1   DD UNIT=SYSDA,SPACE=(CYL,(10,1))
//DISK1    DD UNIT=3330,
//             VOL=SER=CDHSPK,
//             DISP=OLD
//TAPE     DD UNIT=2400,
//           VOLUME=SER=OS2369
//           DISP=(NEW,PASS),
//           LABEL=(,BLP),
//           DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)
//SYSIN    DD *
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.JCL,                    X
                TODD=TAPE,TO=2400=(OS2369,1),                          X
                RENAME=CDHS.AQS.JCL
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.JOBS,                   X
                TODD=TAPE,TO=2400=(OS2369,2),                          X
                RENAME=CDHS.AQS.JOBS
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.SOURCE,                 X
                TODD=TAPE,TO=2400=(OS2369,3),                          X
                RENAME=CDHS.AQS.SOURCE
       COPY     PDS=CN.EPALMH.A087.CDHS.HQ.AQS.SYSIN,                  X
                TODD=TAPE,TO=2400=(OS2369,4),                          X
                RENAME=CDHS.AQS.SYSIN
/*
```

Figure 4.11
Output From An EIS/P&R Tape Copy

```
//PNR150   JOB  PTI,C44,P02069,FRANKE,T=1,PRTY=2,FORMS=WHITE
//COPY      EXEC PGM=IEHMOVE,
//              REGION=100K,
//              TIME=(1,0)
//SYSPRINT DD SYSOUT=A
//SYSUT1    DD UNIT=SYSDA,SPACE=(CYL,(10,1))
//DISK1     DD UNIT=DISK,
//              VOL=SER=RCADP1,
//              DISP=OLD
//TAPE      DD UNIT=2400,
//             VOLUME=SER=PNR150,RING=IN,
//             DISP=(NEW,PASS),
//             LABEL=(,BLP),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)
//SYSIN     DD *
IEF142I - STEP WAS EXECUTED - COND CODE 0004
COPY     CORE=100K TIME---0:48.5    UR---252  RD/WR---0:19.5    RC-----4
COPY     USED=060K  CPU---0:03.2  DISK--1248  REWND---0:00.1
COPY                I/O---0:45.3  TAPE--2122  FL SR---0:00.1

PNR150   TIME---0:48.6
```

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Figure 4.11 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE

         COPY     PDS=HQ.CDHS.PNR.JCL,                                                 X
                  FROM=DISK=RCADP1,                                                    X
                  TODD=TAPE,TO=2400=(PNR150,1),                                        X
                  RENAME=CDHS.PNR.JCL
IEH411I DATA SET HQ.CDHS.PNR.JCL UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR CDHSCBL  HAS BEEN UNLOADED
MEMBR CDHSCHLE HAS BEEN UNLOADED
MEMBR CDHSCOML HAS BEEN UNLOADED
MEMBR CDHSFTCL HAS BEEN UNLOADED
MEMBR CDHSFTN  HAS BEEN UNLOADED
MEMBR CDHSFTNL HAS BEEN UNLOADED
MEMBR PNRANCNV HAS BEEN UNLOADED
MEMBR PNRBREPT HAS BEEN UNLOADED
MEMBR PNRCNCAT HAS BEEN UNLOADED
MEMBR PNRCNVRT HAS BEEN UNLOADED
MEMBR PNRDCONV HAS BEEN UNLOADED
MEMBR PNREFUPD HAS BEEN UNLOADED
MEMBR PNRFUPDT HAS BEEN UNLOADED
MEMBR PNRHREPT HAS BEEN UNLOADED
MEMBR PNRISORT HAS BEEN UNLOADED
MEMBR PNRKEFIN HAS BEEN UNLOADED
MEMBR PNRNCONV HAS BEEN UNLOADED
MEMBR PNRPREPT HAS BEEN UNLOADED
MEMBR PNRRETVR HAS BEEN UNLOADED
MEMBR PNRSORTR HAS BEEN UNLOADED
MEMBR PNRTBGEN HAS BEEN UNLOADED
        DATA SET HQ.CDHS.PNR.JCL HAS BEEN COPIED TO VOLUME(S)
                 UNIT REC OR UNLABLED TAPE
                 AND IS NOW NAMED CDHS.PNR.JCL


         COPY     PDS=HQ.CDHS.PNR.JOBS,                                                X
                  FROM=DISK=RCADP1,                                                    X
                  TODD=TAPE,TO=2400=(PNR150,2),                                        X
                  RENAME=CDHS.PNR.JOBS
IEH411I DATA SET HQ.CDHS.PNR.JOBS UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR PNRJOB01 HAS BEEN UNLOADED
MEMBR PNRJOB02 HAS BEEN UNLOADED
MEMBR PNRJOB03 HAS BEEN UNLOADED
MEMBR PNRJOB04 HAS BEEN UNLOADED
MEMBR PNRJOB05 HAS BEEN UNLOADED
MEMBR PNRJOB06 HAS BEEN UNLOADED
MEMBR PNRJOB07 HAS BEEN UNLOADED
MEMBR PNRJOB08 HAS BEEN UNLOADED
MEMBR PNRJOB09 HAS BEEN UNLOADED
MEMBR PNRJOB10 HAS BEEN UNLOADED
MEMBR PNRJOB11 HAS BEEN UNLOADED
MEMBR PNRJOB12 HAS BEEN UNLOADED
MEMBR PNRJOB13 HAS BEEN UNLOADED
MEMBR PNRJOB14 HAS BEEN UNLOADED
MEMBR PNRJOB15 HAS BEEN UNLOADED
MEMBR PNRJOB16 HAS BEEN UNLOADED
MEMBR PNRJOB17 HAS BEEN UNLOADED
MEMBR PNRJOB18 HAS BEEN UNLOADED
MEMBR PNRJOB19 HAS BEEN UNLOADED
MEMBR PNRJOB20 HAS BEEN UNLOADED
MEMBR PNRJOB21 HAS BEEN UNLOADED
```

Figure 4.11 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


MEMBR PNRJOB22 HAS BEEN UNLOADED
MEMBR PNRJOB23 HAS BEEN UNLOADED
MEMBR PNRJOB24 HAS BEEN UNLOADED
MEMBR PNRJOB25 HAS BEEN UNLOADED
MEMBR PNRJOB26 HAS BEEN UNLOADED
MEMBR PNRJOB27 HAS BEEN UNLOADED
MEMBR PNRJOB28 HAS BEEN UNLOADED
MEMBR PNRJOB29 HAS BEEN UNLOADED
MEMBR PNRJOB30 HAS BEEN UNLOADED
MEMBR PNRJOB31 HAS BEEN UNLOADED
MEMBR PNRJOB32 HAS BEEN UNLOADED
MEMBR PNRJOB33 HAS BEEN UNLOADED
MEMBR PNRJOB34 HAS BEEN UNLOADED
MEMBR PNRJOB35 HAS BEEN UNLOADED
MEMBR PNRJOB36 HAS BEEN UNLOADED
MEMBR PNRJOB37 HAS BEEN UNLOADED
        DATA SET HQ.CDHS.PNR.JOBS HAS BEEN COPIED TO VOLUME(S)
                   UNIT REC OR UNLABLED TAPE
                   AND IS NOW NAMED CDHS.PNR.JOBS


       COPY    PDS=HQ.CDHS.PNR.SOURCE,                                  X
               FROM=DISK=RCADP1,                                        X
               TODD=TAPE,TO=2400=(PNR150,3),                            X
               RENAME=CDHS.PNR.SOURCE
IEH411I DATA SET HQ.CDHS.PNR.SOURCE UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR ADASHEDS HAS BEEN UNLOADED
MEMBR BDBREAKS HAS BEEN UNLOADED
MEMBR BDCRDREC HAS BEEN UNLOADED
MEMBR BDFILSEC HAS BEEN UNLOADED
MEMBR BDHOLDBR HAS BEEN UNLOADED
MEMBR BDPULLTR HAS BEEN UNLOADED
MEMBR BDPRTARE HAS BEEN UNLOADED
MEMBR BDRPTSEC HAS BEEN UNLOADED
MEMBR BDSCTL1  HAS BEEN UNLOADED
MEMBR BDSCTL2  HAS BEEN UNLOADED
MEMBR BDSCTL3  HAS BEEN UNLOADED
MEMBR BDSCTL4  HAS BEEN UNLOADED
MEMBR BDSUMARY HAS BEEN UNLOADED
MEMBR BDSUMBUC HAS BEEN UNLOADED
MEMBR BDWORK01 HAS BEEN UNLOADED
MEMBR BDWORK77 HAS BEEN UNLOADED
MEMBR BPCARD01 HAS BEEN UNLOADED
MEMBR BPCARD02 HAS BEEN UNLOADED
MEMBR BPCARD03 HAS BEEN UNLOADED
MEMBR BPCARD04 HAS BEEN UNLOADED
MEMBR BPCRDLUP HAS BEEN UNLOADED
MEMBR BPFDINIT HAS BEEN UNLOADED
MEMBR BPGENSUM HAS BEEN UNLOADED
MEMBR BPPOINIT HAS BEEN UNLOADED
MEMBR BPRDRECS HAS BEEN UNLOADED
MEMBR BPRODISG HAS BEEN UNLOADED
MEMBR BPSEARCH HAS BEEN UNLOADED
MEMBR BPSUMARY HAS BEEN UNLOADED
MEMBR BPTRANSL HAS BEEN UNLOADED
MEMBR CDMEDSCV HAS BEEN UNLOADED
MEMBR DDMEDSAS HAS BEEN UNLOADED
```

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Figure 4.11 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


MEMBR EDTRNGEN HAS BEEN UNLOADED
MEMBR FDFILMNT HAS BEEN UNLOADED
MEMBR GDCONFIG HAS BEEN UNLOADED
MEMBR GDCURMSG HAS BEEN UNLOADED
MEMBR GDEFBNDX HAS BEEN UNLOADED
MEMBR GDEFSNDX HAS BEEN UNLOADED
MEMBR GDEFTABL HAS BEEN UNLOADED
MEMBR GDEFWNDX HAS BEEN UNLOADED
MEMBR GDEFWTBL HAS BEEN UNLOADED
MEMBR GDEMFNDX HAS BEEN UNLOADED
MEMBR GDEMFTBL HAS BEEN UNLOADED
MEMBR GDFIXSEG HAS BEEN UNLOADED
MEMBR GDIDENT  HAS BEEN UNLOADED
MEMBR GDMCHNPR HAS BEEN UNLOADED
MEMBR GDNEDSRC HAS BEEN UNLOADED
MEMBR GDNEDS01 HAS BEEN UNLOADED
MEMBR GDNEDS02 HAS BEEN UNLOADED
MEMBR GDNEDS03 HAS BEEN UNLOADED
MEMBR GDNEDS04 HAS BEEN UNLOADED
MEMBR GDNEDS05 HAS BEEN UNLOADED
MEMBR GDNEDS06 HAS BEEN UNLOADED
MEMBR GDNWPAGE HAS BEEN UNLOADED
MEMBR GDOCNTL  HAS BEEN UNLOADED
MEMBR GDOMSTR  HAS BEEN UNLOADED
MEMBR GDPNTSRC HAS BEEN UNLOADED
MEMBR GDPRTFIL HAS BEEN UNLOADED
MEMBR GDRGSTRN HAS BEEN UNLOADED
MEMBR GDSVSET2 HAS BEEN UNLOADED
MEMBR GDTRANS  HAS BEEN UNLOADED
MEMBR GDWORK01 HAS BEEN UNLOADED
MEMBR GDWORK77 HAS BEEN UNLOADED
MEMBR GPERRRTN HAS BEEN UNLOADED
MEMBR GPEXIT   HAS BEEN UNLOADED
MEMBR GPHDRRTN HAS BEEN UNLOADED
MEMBR GPPRINT  HAS BEEN UNLOADED
MEMBR GPREMF01 HAS BEEN UNLOADED
MEMBR GPRNTHDR HAS BEEN UNLOADED
MEMBR GPRNTRTN HAS BEEN UNLOADED
MEMBR HDANREPT HAS BEEN UNLOADED
MEMBR IDTRNSRT HAS BEEN UNLOADED
MEMBR IFTEST01 HAS BEEN UNLOADED
MEMBR JDSRTGEN HAS BEEN UNLOADED
MEMBR KDEMFINS HAS BEEN UNLOADED
MEMBR LDLNGPRC HAS BEEN UNLOADED
MEMBR NDNEDSCV HAS BEEN UNLOADED
MEMBR NULL     HAS BEEN UNLOADED
MEMBR PDFILPRT HAS BEEN UNLOADED
MEMBR RTRETRVR HAS BEEN UNLOADED
MEMBR TDCONCAT HAS BEEN UNLOADED
MEMBR TDTBLGEN HAS BEEN UNLOADED
MEMBR UDEFCNVT HAS BEEN UNLOADED
        DATA SET HQ.CDHS.PNR.SOURCE HAS BEEN COPIED TO VOLUME(S)
                       UNIT REC OR UNLABLED TAPE
                       AND IS NOW NAMED CDHS.PNR.SOURCE
```

Figure 4.12

Output From An AQDHS-II Tape Copy

```
//AQS130  JOB  RTI.C44,P02069,FRANKE,T=4,PRTY=0,FORMS=WHITE
//COPY      EXEC PGM=IEHMOVE,
//              REGION=100K,
//              TIME=(4,0)
//SYSPRINT DD SYSOUT=A
//SYSUT1    DD UNIT=SYSDA,SPACE=(CYL,(10,1))
//DISK1     DD UNIT=DISK,
//              VOL=SER=RCADP1,
//              DISP=OLD
//TAPE      DD UNIT=2400,
//             VOLUME=SER=AQS130,RING=IN,
//             DISP=(NEW,PASS),
//   ,    ,    LABEL=(,BLP),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)
//SYSIN     DD *
IEF142I - STEP WAS EXECUTED - COND CODE 0004
COPY      CORE=100K TIME---2:00.0    UR---278  RD/WR---0:28.8    RC------4
COPY      USED=060K  CPU---0:05.4  DISK--4239  REWND---0:00.1
COPY                 I/O---1:54.6  TAPE--3174  FL SR---0:00.1

AQS130   TIME---2:00.1
```

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Figure 4.12 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


       COPY     PDS=HQ.CDHS.AQS.JCL,                                           X
                FROM=DISK=RCADP1,                                              X
                TODD=TAPE,TO=2400=(AQS130,1),                                  X
                RENAME=CDHS.AQS.JCL
IEH411I DATA SET HQ.CDHS.AQS.JCL UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR AQSACNVT HAS BEEN UNLOADED
MEMBR AQSBCNVT HAS BEEN UNLOADED
MEMBR AQSCNVRT HAS BEEN UNLOADED
MEMBR AQSDANAL HAS BEEN UNLOADED
MEMBR AQSDUMP  HAS BEEN UNLOADED
MEMBR AQSELIST HAS BEEN UNLOADED
MEMBR AQSFUPDT HAS BEEN UNLOADED
MEMBR AQSHUPD1 HAS BEEN UNLOADED
MEMBR AQSHUPD2 HAS BEEN UNLOADED
MEMBR AQSHUPD3 HAS BEEN UNLOADED
MEMBR AQSIAVGS HAS BEEN UNLOADED
MEMBR AQSILIST HAS BEEN UNLOADED
MEMBR AQSMERGE HAS BEEN UNLOADED
MEMBR AQSMFUPD HAS BEEN UNLOADED
MEMBR AQSMSENT HAS BEEN UNLOADED
MEMBR AQSNSENT HAS BEEN UNLOADED
MEMBR AQSPMETH HAS BEEN UNLOADED
MEMBR AQSPSITE HAS BEEN UNLOADED
MEMBR AQSPSTDS HAS BEEN UNLOADED
MEMBR AQSRETVR HAS BEEN UNLOADED
MEMBR AQSRTRCL HAS BEEN UNLOADED
MEMBR AQSRTRGO HAS BEEN UNLOADED
MEMBR AQSSLIST HAS BEEN UNLOADED
MEMBR AQSTEDIT HAS BEEN UNLOADED
MEMBR AQSUBILD HAS BEEN UNLOADED
MEMBR CDHSCBL  HAS BEEN UNLOADED
MEMBR CDHSCBLE HAS BEEN UNLOADED
MEMBR CDHSCOML HAS BEEN UNLOADED
MEMBR CDHSFTCL HAS BEEN UNLOADED
MEMBR CDHSFTN  HAS BEEN UNLOADED
MEMBR CDHSFTNL HAS BEEN UNLOADED
         DATA SET HQ.CDHS.AQS.JCL HAS BEEN COPIED TO VOLUME(S)
                     UNIT PFC OR UNLABLED TAPE
                     AND IS NOW NAMED CDHS.AQS.JCL


       COPY     PDS=HQ.CDHS.AQS.JOBS,                                          X
                FROM=DISK=RCADP1,                                              X
                TODD=TAPE,TO=2400=(AQS130,2),                                  X
                RENAME=CDHS.AQS.JOBS
IEH411I DATA SET HQ.CDHS.AQS.JOBS UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR TEST01    HAS BEEN UNLOADED
MEMBR TEST02    HAS BEEN UNLOADED
MEMBR TEST03    HAS BEEN UNLOADED
MEMBR TEST04    HAS BEEN UNLOADED
MEMBR TEST05    HAS BEEN UNLOADED
MEMBR TEST06    HAS BEEN UNLOADED
MEMBR TEST07    HAS BEEN UNLOADED
MEMBR TEST08    HAS BEEN UNLOADED
MEMBR TEST09    HAS BEEN UNLOADED
MEMBR TEST10    HAS BEEN UNLOADED
MEMBR TEST11    HAS BEEN UNLOADED
```

Figure 4.12 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


MEMBR TEST12   HAS BEEN UNLOADED
MEMBR TEST13   HAS BEEN UNLOADED
MEMBR TEST14   HAS BEEN UNLOADED
MEMBR TEST15   HAS BEEN UNLOADED
MEMBR TEST16   HAS BEEN UNLOADED
MEMBR TEST17   HAS BEEN UNLOADED
MEMBR TEST18   HAS BEEN UNLOADED
MEMBR TEST19   HAS BEEN UNLOADED
MEMBR TEST20   HAS BEEN UNLOADED
MEMBR TEST21   HAS BEEN UNLOADED
MEMBR TEST22   HAS BEEN UNLOADED
MEMBR TEST23   HAS BEEN UNLOADED
MEMBR TEST24   HAS BEEN UNLOADED
MEMBR TEST25   HAS BEEN UNLOADED
MEMBR TEST26   HAS BEEN UNLOADED
MEMBR TEST27   HAS BEEN UNLOADED
MEMBR TEST28   HAS BEEN UNLOADED
MEMBR TEST29   HAS BEEN UNLOADED
MEMBR TEST30   HAS BEEN UNLOADED
MEMBR TEST31   HAS BEEN UNLOADED
MEMBR TEST32   HAS BEEN UNLOADED
MEMBR TEST33   HAS BEEN UNLOADED
MEMBR TEST34   HAS BEEN UNLOADED
MEMBR TEST35   HAS BEEN UNLOADED
MEMBR TEST36   HAS BEEN UNLOADED
MEMBR TEST37   HAS BEEN UNLOADED
MEMBR TEST38   HAS BEEN UNLOADED
MEMBR TEST39   HAS BEEN UNLOADED
MEMBR TEST40   HAS BEEN UNLOADED
MEMBR TEST41   HAS BEEN UNLOADED
MEMBR TEST42   HAS BEEN UNLOADED
MEMBR TEST43   HAS BEEN UNLOADED
MEMBR TEST44   HAS BEEN UNLOADED
MEMBR TEST45   HAS BEEN UNLOADED
MEMBR TEST46   HAS BEEN UNLOADED
MEMBR TEST47   HAS BEEN UNLOADED
MEMBR TEST48   HAS BEEN UNLOADED
MEMBR TEST49   HAS BEEN UNLOADED
MEMBR TEST50   HAS BEEN UNLOADED
MEMBR TEST51   HAS BEEN UNLOADED
MEMBR TEST52   HAS BEEN UNLOADED
MEMBR TEST53   HAS BEEN UNLOADED
         DATA SET HQ.CDHS.ADS.JOBS HAS BEEN COPIED TO VOLUME(S)
                     UNIT REC OR UNLABLED TAPE
                     AND IS NOW NAMED CDHS.ADS.JOBS


        COPY     PDS=HQ.CDHS.ADS.SOURCE,                                       X
                 FROM=DISK=FCADP1,                                             X
                 TODD=TAPE,TO=2400=(ADS130,3),                                 X
                 RENAME=CDHS.ADS.SOURCE
 IEH411I DATA SET HQ.CDHS.ADS.SOURCE UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
 MEMBR ADCONVRT HAS BEEN UNLOADED
 MEMBR ADMERGE  HAS BEEN UNLOADED
 MEMBR BDCONVRT HAS BEEN UNLOADED
 MEMBR CDCONVRT HAS BEEN UNLOADED
 MEMBR DDSTATIS HAS BEEN UNLOADED
```

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Figure 4.12 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


MEMBR EDRPTLST HAS BEEN UNLOADED
MEMBR FDFILMNT HAS BEEN UNLOADED
MEMBR GDMAXRDG HAS BEEN UNLOADED
MEMBR GDMSTREC HAS BEEN UNLOADED
MEMBR GDPRTFIL HAS BEEN UNLOADED
MEMBR GPERRRTN HAS BEEN UNLOADED
MEMBR GPHDRRTN HAS BEEN UNLOADED
MEMBR GPRMTHDR HAS BEEN UNLOADED
MEMBR GPRNTRTN HAS BEEN UNLOADED
MEMBR HDTABLE1 HAS BEEN UNLOADED
MEMBR HDTABLE2 HAS BEEN UNLOADED
MEMBR HDTABLE3 HAS BEEN UNLOADED
MEMBR IOSLDAVG HAS BEEN UNLOADED
MEMBR LDLNGPRC HAS BEEN UNLOADED
MEMBR MDSENTDL HAS BEEN UNLOADED
MEMBR MDSENTNL HAS BEEN UNLOADED
MEMBR NULL     HAS BEEN UNLOADED
MEMBR PDMETHOD HAS BEEN UNLOADED
MEMBR PDPRMSTD HAS BEEN UNLOADED
MEMBR PDSITE   HAS BEEN UNLOADED
MEMBR RDANSRCH HAS BEEN UNLOADED
MEMBR RDANSREC HAS BEEN UNLOADED
MEMBR RDCNTLSW HAS BEEN UNLOADED
MEMBR RDERRMSG HAS BEEN UNLOADED
MEMBR RDHDINGS HAS BEEN UNLOADED
MEMBR RDLSTMSG HAS BEEN UNLOADED
MEMBR RDSLCTLS HAS BEEN UNLOADED
MEMBR RDSLERMS HAS BEEN UNLOADED
MEMBR RDUSER01 HAS BEEN UNLOADED
MEMBR RDWKMSTR HAS BEEN UNLOADED
MEMBR RPBLDNUL HAS BEEN UNLOADED
MEMBR RPDELTED HAS BEEN UNLOADED
MEMBR RPGENREC HAS BEEN UNLOADED
MEMBR RPGMINIT HAS BEEN UNLOADED
MEMBR RPGMINIL HAS BEEN UNLOADED
MEMBR RPMAINLP HAS BEEN UNLOADED
MEMBR RPMAINRT HAS BEEN UNLOADED
MEMBR RPMAINSD HAS BEEN UNLOADED
MEMBR RPMVMSTR HAS BEEN UNLOADED
MEMBR RPOLINIT HAS BEEN UNLOADED
MEMBR RPREADRT HAS BEEN UNLOADED
MEMBR RPREPEAT HAS BEEN UNLOADED
MEMBR RPRNDTSG HAS BEEN UNLOADED
MEMBR RPSKCOMP HAS BEEN UNLOADED
MEMBR RPSLRCTL HAS BEEN UNLOADED
MEMBR RPSTDCTL HAS BEEN UNLOADED
MEMBR RPTESTD1 HAS BEEN UNLOADED
MEMBR RPUSERRT HAS BEEN UNLOADED
MEMBR RPWRAPIT HAS BEEN UNLOADED
MEMBR RPWRAPUP HAS BEEN UNLOADED
MEMBR RPWRITCL HAS BEEN UNLOADED
MEMBR RPWRITE  HAS BEEN UNLOADED
MEMBR RPWRITES HAS BEEN UNLOADED
MEMBR RPWRITWK HAS BEEN UNLOADED
MEMBR RTRETRVW HAS BEEN UNLOADED
MEMBR SDPRINTS HAS BEEN UNLOADED
MEMBR TDTREDIT HAS BEEN UNLOADED
```

Figure 4.12 (Continued)

```
SYSTEM SUPPORT UTILITIES ---- IEHMOVE


MEMBR UDBLDSRD HAS BEEN UNLOADED
        DATA SET HQ.CDHS.ADS.SOURCE HAS BEEN COPIED TO VOLUME(S)
                  UNIT REC OR UNLABLED TAPE
                  AND IS NOW NAMED CDHS.ADS.SOURCE


       COPY    PDS=HQ.CDHS.ADS.SYSIN,                                X
               FROM=DISK=RCADP1,                                     X
               TODD=TAPE,TO=2400=(ADS130,4),                         X
               RENAME=CDHS.ADS.SYSIN
IEH411I DATA SET HQ.CDHS.ADS.SYSIN UNLOADED BECAUSE ACCESS METHOD NOT COMPATIBLE
MEMBR ALLCTIN  HAS BEEN UNLOADED
MEMBR HSRTCTL1 HAS BEEN UNLOADED
MEMBR HSRTCTL2 HAS BEEN UNLOADED
MEMBR HSRTCTL3 HAS BEEN UNLOADED
MEMBR SPACEIN  HAS BEEN UNLOADED
MEMBR TSORTCTL HAS BEEN UNLOADED
MEMBR USORTCTL HAS BEEN UNLOADED
        DATA SET HQ.CDHS.ADS.SYSIN HAS BEEN COPIED TO VOLUME(S)
                  UNIT REC OR UNLABLED TAPE
                  AND IS NOW NAMED CDHS.ADS.SYSIN
```

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Figure 4.13

NADB TAPE INVENTORY FORM

REEL NUMBER(S)

0S2369

USER IDENTIFICATION

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

12/18/76
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709

CDHS
ACCOUNT CODE

AQDHS-II
PROJECT CODE

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) CDHS-AQDHS

FILE DESCRIPTION

(QUAL • FILE NAME) System Copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED

☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

1/15/77: AQDHS-II Copied (IEHMOVE - Update 20)

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.14

NADB TAPE INVENTORY FORM

USER IDENTIFICATION

NAME (LAST, FIRST, MIDDLE): McMaster, Larry R.
DATE ASSIGNED: 12/18/76

Research Triangle Institute, RTP, N.C. 27709

ACCOUNT CODE: CDHS
PROJECT CODE: AQDHS-II

REEL NUMBER(S)
0S2369

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) CDHS-AQDHS

FILE DESCRIPTION

(QUAL • FILE NAME) System Copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS
☐ VAR LENGTH ____ THROUGH ____ CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ____ RECORDS PER BLOCK
☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

1/15/77: AQDHS-II Copied (IEHMOVE - Update 20)
1/16/77: Requested Tape from COMNET
2/10/77: Tape received from COMNET

FILE RELEASED BY: ____ DATE ____

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.15

AQDHS-II Installation JCL

```
//EPALMH01  JOB  (A087,LMH,,LMH,,3),TIME=12,PRTY=5
//* AQDHS INSTALLATION
//*
//* THIS JOB WILL SCRATCH AND RE-ALLOCATE ALL DATA SETS NECESSARY FOR
//*
//* THE INSTALLATION OF THE AQDHS.  IT WILL THEN COPY THE INSTALLATION
//*
//* TAPE INTO THESE DATA SETS AND PUNCH THE JOBS REQUIRED TO COMPILE
//*
//* AND LINK-EDIT THE VARIOUS PROGRAMS IN THE SYSTEM.  IT WILL THEN
//*
//* PRINT THOSE JOBS, THE CATALOGED PROCEDURES, THE LINKAGE EDITOR
//*
//* CONTROL CARDS, THE SORT CONTROL CARDS AND THE TEST DATA.  THE
//*
//* LISTING SHOULD BE EXAMINED TO BE CERTAIN THAT THE PROCEDURES ARE
//*
//* CORRECT FOR THIS PARTICULAR COMPUTER CENTER.  AFTER ANY NECESSARY
//*
//* CHANGES HAVE BEEN MADE, THE JOBS PUNCHED OUT MAY BE RUN
//*
//* SEQUENTIALLY TO INSTALL AND TEST THE AQDHS.
//*
//SCRATCH EXEC PGM=IEFBR14,
//             TIME=(0,5),
//             REGION=4K
//JCL        DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.AQS.JCL
//JOBS       DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.AQS.JOBS
//LOAD       DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.AQS.LOAD
//SOURCE     DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.AQS.SOURCE
//SYSIN      DD DISP=(OLD,DELETE),
//             DSNAME=CDHS.AQS.SYSIN
//ALLOC    EXEC PGM=IEFBR14,
//             REGION=4K,
//             TIME=(0,5)
//JCL        DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(20,10,5)),
//             DSNAME=CDHS.AQS.JCL
//JOBS       DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(10,10,5)),
//             DSNAME=CDHS.AQS.JOBS
//LOAD       DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(44,10,5)),
//             DSNAME=CDHS.AQS.LOAD
//SOURCE     DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(200,50,5)),
//             DSNAME=CDHS.AQS.SOURCE
//SYSIN      DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(5,5,5)),
//             DSNAME=CDHS.AQS.SYSIN
```

Figure 4.15 (Continued)

```
//TAPEIN  EXEC PGM=IEHMOVE,                                             00006500
//             REGION=90K,                                              00006600
//             TIME=(5,0)                                               00006700
//SYSPRINT  DD SYSOUT=A                                                 00006800
//SYSUT1    DD UNIT=3330,                                               00006900
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00007000
//             DISP=OLD                                                 00007100
//CDHSPK    DD UNIT=3330,                                               00007200
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00007300
//             DISP=OLD                                                 00007400
//TAPE      DD UNIT=2400,                                               00007500
//             VOLUME=SER=AQSTAP,                                       00007600
//             DISP=(NEW,PASS),                                         00007700
//             LABEL=(,BLP),                                            00007800
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)                00007900
//SYSIN     DD *                                                        00008000
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(AQSTAP,1),        X00008100
               PDS=CDHS.AQS.JCL                                         00008200
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(AQSTAP,2),        X00008300
               PDS=CDHS.AQS.JOBS                                        00008400
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(AQSTAP,3),        X00008500
               PDS=CDHS.AQS.SOURCE                                      00008600
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(AQSTAP,4),        X00008700
               PDS=CDHS.AQS.SYSIN                                       00008800
//PUNCH   EXEC PGM=IEBPTPCH,                                            00008900
//             REGION=60K,                                              00009000
//             TIME=(1,0)                                               00009100
//SYSPRINT  DD SYSOUT=A                                                 00009200
//SYSUT1    DD DSNAME=CDHS.AQS.JOBS,                                    00009300
//             VOLUME=(PRIVATE,RETAIN),                                 00009400
//             DISP=(SHR,PASS)                                          00009500
//SYSUT2    DD SYSOUT=B                                                 00009600
//SYSIN     DD *                                                        00009700
       PUNCH TYPORG=PO,MAXNAME=2                                        00009800
//PRINT1  EXEC PGM=IEBPTPCH,                                            00009900
//             REGION=60K,                                              00010000
//             TIME=(1,0)                                               00010100
//SYSPRINT  DD SYSOUT=A                                                 00010200
//SYSUT1    DD DSNAME=CDHS.AQS.JCL,                                     00010300
//             VOLUME=(PRIVATE,RETAIN),                                 00010400
//             DISP=(SHR,PASS)                                          00010500
//SYSUT2    DD SYSOUT=A                                                 00010600
//SYSIN     DD *                                                        00010700
       PRINT   TYPORG=PO,MAXFLDS=1                                      00010800
       TITLE   ITEM=('  AQDHS-II CATALOGED PROCEDURES',1)               00010900
       TITLE   ITEM=(' ',1)                                             00011000
       RECORD  FIELD=(80,1,,25)                                         00011100
//PRINT2  EXEC PGM=IEBPTPCH,                                            00011200
//             REGION=60K,                                              00011300
//             TIME=(1,0)                                               00011400
//SYSPRINT  DD SYSOUT=A                                                 00011500
//SYSUT1    DD DSNAME=CDHS.AQS.JOBS,                                    00011600
//             VOLUME=(PRIVATE,RETAIN),                                 00011700
//             DISP=(SHR,PASS)                                          00011800
//SYSUT2    DD SYSOUT=A                                                 00011900
//SYSIN     DD *                                                        00012000
       PRINT   TYPORG=PO,MAXFLDS=1                                      00012100
       TITLE   ITEM=('AQDHS-II INSTALLATION JOBS',1)                    00012200
       TITLE   ITEM=(' ',1)                                             00012300
       RECORD  FIELD=(80,1,,25)                                         00012400
//PRINT3  EXEC PGM=IEBPTPCH,                                            00012500
//             REGION=60K,                                              00012600
//             TIME=(1,0)                                               00012700
//SYSPRINT  DD SYSOUT=A                                                 00012800
```

Figure 4.15 (Continued)

```
//SYSUT1    DD DSNAME=CDHS.AQS.SOURCE,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SYSUT2    DD SYSOUT=A
//SYSIN     DD *
      PRINT   TYPORG=PO,MAXFLDS=1
      TITLE   ITEM=('AQDHS-II SOURCE CODE',1)
      TITLE   ITEM=(' ',1)
      RECORD  FIELD=(80,1,,25)
//PRINT4  EXEC PGM=IEBPTPCH,
//             REGION=60K,
//             TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT1    DD DSNAME=CDHS.AQS.SYSIN,
//             VOLUME=(PRIVATE,RETAIN),
//             DISP=(SHR,PASS)
//SYSUT2    DD SYSOUT=A
//SYSIN     DD *
      PRINT   TYPORG=PO,MAXFLDS=1
      TITLE   ITEM=('  AQDHS-II SYSIN STATEMENTS',1)
      TITLE   ITEM=(' ',1)
      RECORD  FIELD=(80,1,,25)
```

Figure 4.15 (Continued)

EIS/P&R Installation JCL

```
//EPALMH02  JOB  (A087,LMH,,LMH,,3),TIME=12,PRTY=5                      00000100
//*                                                                     00000200
//* EIS/P&R INSTALLATION                                                00000300
//*                                                                     00000400
//* THIS JOB WILL SCRATCH AND RE-ALLOCATE ALL DATA SETS NECESSARY FOR   00000500
//*                                                                     00000600
//* THE INSTALLATION OF EIS/P&R.  IT WILL THEN COPY THE INSTALLATION    00000700
//*                                                                     00000800
//* TAPE INTO THESE DATA SETS AND PUNCH THE JOBS REQUIRED TO COMPILE    00000900
//*                                                                     00001000
//* AND LINK-EDIT THE VARIOUS PROGRAMS IN THE SYSTEM.  IT WILL THEN     00001100
//*                                                                     00001200
//* PRINT THOSE JOBS, THE CATALOGED PROCEDURES, THE LINKAGE EDITOR      00001300
//*                                                                     00001400
//* CONTROL CARDS, THE SORT CONTROL CARDS AND THE TEST DATA.  THE       00001500
//*                                                                     00001600
//* LISTING SHOULD BE EXAMINED TO BE CERTAIN THAT THE PROCEDURES ARE    00001700
//*                                                                     00001800
//* CORRECT FOR THIS PARTICULAR COMPUTER CENTER.  AFTER ANY NECESSARY   00001900
//*                                                                     00002000
//* CHANGES HAVE BEEN MADE, THE JOBS PUNCHED OUT MAY BE RUN             00002100
//*                                                                     00002200
//* SEQUENTIALLY TO INSTALL AND TEST EIS/P&R.                           00002300
//*                                                                     00002400
//SCRATCH EXEC PGM=IEFBR14,                                             00002500
//             TIME=(0,5),                                              00002600
//             REGION=4K                                                00002700
//JCL       DD DISP=(OLD,DELETE),                                       00002800
//             DSNAME=CDHS.PNR.JCL                                      00002900
//JOBS      DD DISP=(OLD,DELETE),                                       00003000
//             DSNAME=CDHS.PNR.JOBS                                     00003100
//LOAD      DD DISP=(OLD,DELETE),                                       00003200
//             DSNAME=CDHS.PNR.LOAD                                     00003300
//SOURCE    DD DISP=(OLD,DELETE),                                       00003400
//             DSNAME=CDHS.PNR.SOURCE                                   00003500
//ALLOC   EXEC PGM=IEFBR14,                                             00003600
//             REGION=4K,                                               00003700
//             TIME=(0,5)                                               00003800
//JCL       DD UNIT=3330,                                               00003900
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00004000
//             DISP=(NEW,CATLG,DELETE),                                 00004100
//             SPACE=(TRK,(20,10,5)),                                   00004200
//             DSNAME=CDHS.PNR.JCL                                      00004300
//JOBS      DD UNIT=3330,                                               00004400
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00004500
//             DISP=(NEW,CATLG,DELETE),                                 00004600
//             SPACE=(TRK,(10,10,5)),                                   00004700
//             DSNAME=CDHS.PNR.JOBS                                     00004800
//LOAD      DD UNIT=3330,                                               00004900
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00005000
//             DISP=(NEW,CATLG,DELETE),                                 00005100
//             SPACE=(TRK,(40,10,5)),                                   00005200
//             DSNAME=CDHS.PNR.LOAD                                     00005300
//SOURCE    DD UNIT=3330,                                               00005400
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00005500
//             DISP=(NEW,CATLG,DELETE),                                 00005600
//             SPACE=(TRK,(100,50,5)),                                  00005700
//             DSNAME=CDHS.PNR.SOURCE                                   00005800
//TAPEIN  EXEC PGM=IEHMOVE,                                             00005900
//             REGION=90K,                                              00006000
//             TIME=(5,0)                                               00006100
//SYSPRINT  DD SYSOUT=A                                                 00006200
//SYSUT1    DD UNIT=3330,                                               00006300
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00006400
```

Figure 4.15 (Continued)

```
//             DISP=OLD                                                 00006500
//CDHSPK    DD UNIT=3330,                                               00006600
//             VOLUME=(PRIVATE,RETAIN,SER=CDHSPK),                      00006700
//             DISP=OLD                                                 00006800
//TAPE      DD UNIT=TAPE,                                               00006900
//             VOLUME=SER=PNRTAP,                                       00007000
//             DISP=(NEW,PASS),                                         00007100
//             LABEL=(,BLP),                                            00007200
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=800,DEN=3)                00007300
//SYSIN     DD *                                                        00007400
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PNRTAP,1),        X00007500
               PDS=CDHS.PNR.JCL                                         00007600
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PNRTAP,2),        X00007700
               PDS=CDHS.PNR.JOBS                                        00007800
       COPY    TO=3330=CDHSPK,FROMDD=TAPE,FROM=TAPE=(PNRTAP,3),        X00007900
               PDS=CDHS.PNR.SOURCE                                      00008000
//PUNCH   EXEC PGM=IEBPTPCH,                                            00008100
//             REGION=60K,                                              00008200
//             TIME=(1,0)                                               00008300
//SYSPRINT  DD SYSOUT=A                                                 00008400
//SYSUT1    DD DSNAME=CDHS.PNR.JOBS,                                    00008500
//             VOLUME=(PRIVATE,RETAIN),                                 00008600
//             DISP=(SHR,PASS)                                          00008700
//SYSUT2    DD SYSOUT=B                                                 00008800
//SYSIN     DD *                                                        00008900
      PUNCH TYPORG=PO,MAXNAME=2                                         00009000
//PRINT1  EXEC PGM=IEBPTPCH,                                            00009100
//             REGION=60K,                                              00009200
//             TIME=(1,0)                                               00009300
//SYSPRINT  DD SYSOUT=A                                                 00009400
//SYSUT1    DD DSNAME=CDHS.PNR.JCL,                                     00009500
//             VOLUME=(PRIVATE,RETAIN),                                 00009600
//             DISP=(SHR,PASS)                                          00009700
//SYSUT2    DD SYSOUT=A                                                 00009800
//SYSIN     DD *                                                        00009900
       PRINT   TYPORG=PO,MAXFLDS=1                                      00010000
       TITLE   ITEM=('  EIS/PNR CATALOGED PROCEDURES',1)                00010100
       TITLE   ITEM=(' ',1)                                             00010200
       RECORD  FIELD=(80,1,,25)                                         00010300
//PRINT2  EXEC PGM=IEBPTPCH,                                            00010400
//             REGION=60K,                                              00010500
//             TIME=(1,0)                                               00010600
//SYSPRINT  DD SYSOUT=A                                                 00010700
//SYSUT1    DD DSNAME=CDHS.PNR.JOBS,                                    00010800
//             VOLUME=(PRIVATE,RETAIN),                                 00010900
//             DISP=(SHR,PASS)                                          00011000
//SYSUT2    DD SYSOUT=A                                                 00011100
//SYSIN     DD *                                                        00011200
       PRINT   TYPORG=PO,MAXFLDS=1                                      00011300
       TITLE   ITEM=('EIS/PNR INSTALLATION JOBS',1)                     00011400
       TITLE   ITEM=(' ',1)                                             00011500
       RECORD  FIELD=(80,1,,25)                                         00011600
//PRINT3  EXEC PGM=IEBPTPCH,                                            00011700
//             REGION=60K,                                              00011800
//             TIME=(1,0)                                               00011900
//SYSPRINT  DD SYSOUT=A                                                 00012000
//SYSUT1    DD DSNAME=CDHS.PNR.SOURCE,                                  00012100
//             VOLUME=(PRIVATE,RETAIN),                                 00012200
//             DISP=(SHR,PASS)                                          00012300
//SYSUT2    DD SYSOUT=A                                                 00012400
//SYSIN     DD *                                                        00012500
       PRINT   TYPORG=PO,MAXFLDS=1                                      00012600
       TITLE   ITEM=('EIS/PRR SOURCE CODE',1)                           00012700
       TITLE   ITEM=(' ',1)                                             00012800
```

AQDHS-II installation cover letter (Figure 4.16) or standard EIS/P&R installation cover letter (Figure 4.17) is typed, depending on the subsystem being installed. These, along with the installation deck and the tape copy, are sent to the requestor. The date that this package is mailed to the requestor is recorded on the tape tracking form (Figure 4.18). When the requestor receives the package, he installs the subsystem on his computer and compiles and link edits the programs. When this is successfully done, he will notify NADB that he has received his tape. The date that the requestor acknowledges that he received his tape is recorded on the tape tracking form (Figure 4.19), and his tape label number is returned to the tape label pool for use by another tape. If the tape is one which is leased from WCC, the requestor is reminded in the cover letter to return it to NADB after a successful copy. When NADB receives the tape from the requestor, NADB returns the tape to WCC. These dates are recorded on the tape tracking form also. At this point, the request has been satisfactorily completed and the process begins again for another requestor.

Internal checklists are used for initial distribution of WCC supplied tapes (Figure 4.20) and user supplied tapes (Figure 4.21).

4.1.2 Library Maintenance Procedures for CDHS Tapes

The Comprehensive Data Handling System, being a computerized data base management system, used by dozens of agencies internationally, requires an input/output medium that can be transmitted readily between EPA and the user agency, specifically magnetic tape. The tape medium is used for the following:

a. To transmit copies of either the AQDHS-II subsystem or the EIS/P&R subsystem from EPA to the user.

b. To transmit sample job streams (including test data) that can test the operation of the installed system as well as integrate the agency's actual air quality data into the system.

c. To transmit program updates to correct or expand the capabilities of the system.

d. To transfer data or data files between the user and EPA.

Figure 4.16

AQDHS-II Installation Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Mr. Larry R. McMaster
Research Triangle Institute
P. O. Box 12194
Research Triangle Park, N.C. 27709

Dear Mr. McMaster:

Enclosed is a tape to which I have copied the AQDHS-II subsystem of CDHS. I am also enclosing a copy of the JCL printout which resulted from that copy. Please note that the IBM utility IEHMOVE was used in creating your tape. Since IEHMOVE copies the data sets to your tape in an unloaded format, it will be necessary to use IEHMOVE to copy the system from this tape to your disk prior to your being able to obtain a readable printout.

To aid you in the installation, I am also enclosing an "installation deck" and listing which is set up for an IBM (OS) computer. There are four data sets on your tape each containing several members:

```
DSNAME=CDHS.AQS.JCL
DSNAME=CDHS.AQS.JOBS
DSNAME=CDHS.AQS.SOURCE
DSNAME=CDHS.AQS.SYSIN
```

Necessary disk space for each data set is allocated using IEFBR14. The actual copy from tape to disk is accomplished using IEHMOVE. The load modules will be created when you compile and link-edit the programs. Also, if you wish to re-name the data sets when you copy them from tape to disk, you can do so by adding another control card in each COPY statement.

The installation deck is also set up to punch out all jobs required to accomplish the following:

Copy PROCS to PROCLIB
Compile and Link-Edit all programs
Run test programs using test data supplied (run in order)

It is also set up to print the JCL for all the catalogued procedures, print all the JOBS which were punched above, print the sort control statements, and print all source code.

In addition, the last job step will allow you to map your disk.

Figure 4.16 (Continued)

Please note that it will be necessary for you to make changes to the installation deck to suit your local situation. For example, you may not use 3330 disk packs at your installation, and I am sure that your disk volume-serial number will not be CDHSPK. Your tape unit designation may not be 2400, and you may wish to re-name the data sets upon copying them from your tape to disk.

After you have installed the system, it will be necessary for you to change several lines of coding of the following PROCS prior to copying the PROCS to your PROCLIB:

AQSACNVT
AQSBCNVT
AQSCNVRT
AQSDANAL
AQSELIST
AQSHUPD2
AQSHUPD3
AQSIAVGS
AQSILIST
AQSMERGE
AQSMFUPD
AQSRTRCL
AQSRTRGO
AQSMSENT
AQSNSENT
AQSRETVR
AQSUBILD
AQSHUPD1
AQSTEDIT
AQSFUPDT
AQSSLIST
CDHSCBL
CDHSCBLE
CDHSFTN
CDHSFTNL
CDHSCOML
CDHSNTNL
AQSPMETH
AQSPSITE
AQSPSTDS

Should you choose to retain the data set names of CDHS.AQS., you should change the appropriate lines of each procedure to read:

```
//ddname PROC PROJECT='CDHS.AQS',
```

Figure 4.16 (Continued)

or the equivalent for whatever data set name you choose. Similar changes will be required in the data set (DSNAME=CDHS.AQS.JOBS).

I urge you not to make any modifications other than necessary to the Job Control Language (JCL). NADB will make all modifications to the Standard NADB system, and will support ONLY NADB-modified versions of the system.

Updates 1 through 20 have been incorporated into your system; thus the next AQDHS-II update will be number 21.

If you have any questions, do not hesitate to call me at (919) 541-5491.

Sincerely yours,

Lloyd M. Hedgepeth
Project Officer
National Air Data Branch (MD14)

Figure 4.17

EIS/P&R Installation Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Mr. Larry R. McMaster
Research Triangle Institute
P. O. Box 12194
Research Triangle Park, N.C. 27709

Dear Mr. McMaster:

Enclosed is a tape to which I have copied the EIS/P&R subsystem of CDHS. I am also enclosing a copy of the JCL printout which resulted from that copy. Please note that the IBM utility IEHMOVE was used in creating your tape. Since IEHMOVE copies the data sets to your tape in an unloaded format, it will be necessary to use IEHMOVE to copy the system from this tape to your disk prior to your being able to obtain a readable printout.

To aid you in the installation, I am also enclosing an "installation deck" and listing which is set up for an IBM (OS) computer. There are three data sets on your tape each containing several members:

DSNAME=CDHS.PNR.JCL
DSNAME=CDHS.PNR.JOBS
DSNAME=CDHS.PNR.SOURCE

Necessary disk space for each data set is allocated using IEFBR14. The actual copy from tape to disk is accomplished using IEHMOVE. The load modules will be created when you compile and link-edit the programs. Also, if you wish to re-name the data sets when you copy them from tape to disk, you can do so by adding another control card in each COPY statement.

The installation deck is also set up to punch out all jobs required to accomplish the following:

Copy PROCS to PROCLIB
Compile and Link-Edit all programs
Run test programs using test data supplied (run in order)

It is also set up to print the JCL for all the catalogued procedures, print all the JOBS which were punched above, and print all source code.

In addition, the last job step will allow you to map your disk.

Please note that it will be necessary for you to make changes to the installation deck to suit your local situation. For example, you

Figure 4.17 (Continued)

may not use 3330 disk packs at your installation, and I am sure that your disk volume-serial number will not be CDHSPK. Your tape unit designation may not be 2400, and you may wish to re-name the data sets upon copying them from your tape to disk.

After you have installed the system, it will be necessary for you to change several lines of coding of the following PROCS prior to copying the PROCS to your PROCLIB:

CDHSCBL
CDHSCBLE
CDHSFTN
CDHSFTNL
CDHSCOML
CDHSFINL
PNRANCNV
PNRBREPT
PNRCNCAT
PNRCNVRT
PNRDCONV
PNREFUPD
PNRPREPT
PNRRETVR
PNRSORTR
PNRTBGEN
PNRKEFIN
PNRFUPDT
PNRISORT
PNRHREPT
PNRNCONV

Should you choose to retain the data set names of CDHS.PNR.----, you should change line 300 of the appropriate PROCS to read:

```
//ddname PROC PROJECT='CDHS.PNR',        00000300
```

or the equivalent for whatever data set name you choose.

I urge you not to make any modifications other than necessary to the Job Control Language (JCL). NADB will make all modifications to the Standard NADB system, and will support ONLY NADB-modified versions of the system.

Updates 1 through 21 have been incorporated into your system; thus the next EIS/P&R update will be number 22.

Figure 4.17 (Continued)

If you have any questions, do not hesitate to call me at (919) 541-5491.

Sincerely yours,

Lloyd M. Hedgepeth
Project Officer
National Air Data Branch (MD14)

Figure 4.18

NADB TAPE INVENTORY FORM

USER IDENTIFICATION

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

12/18/76
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709

CDHS
ACCOUNT CODE

AQDHS-II
PROJECT CODE

REEL NUMBER(S)

0S4760

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) CDHS-AQDHS

FILE DESCRIPTION

(QUAL • FILE NAME) System Copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE

☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

1/15/77: AQDHS-II Copied (IEHMOVE - Update 20)
1/16/77: Requested Tape from COMNET
1/22/77: Tape received from COMNET
1/25/77: Sent to User

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

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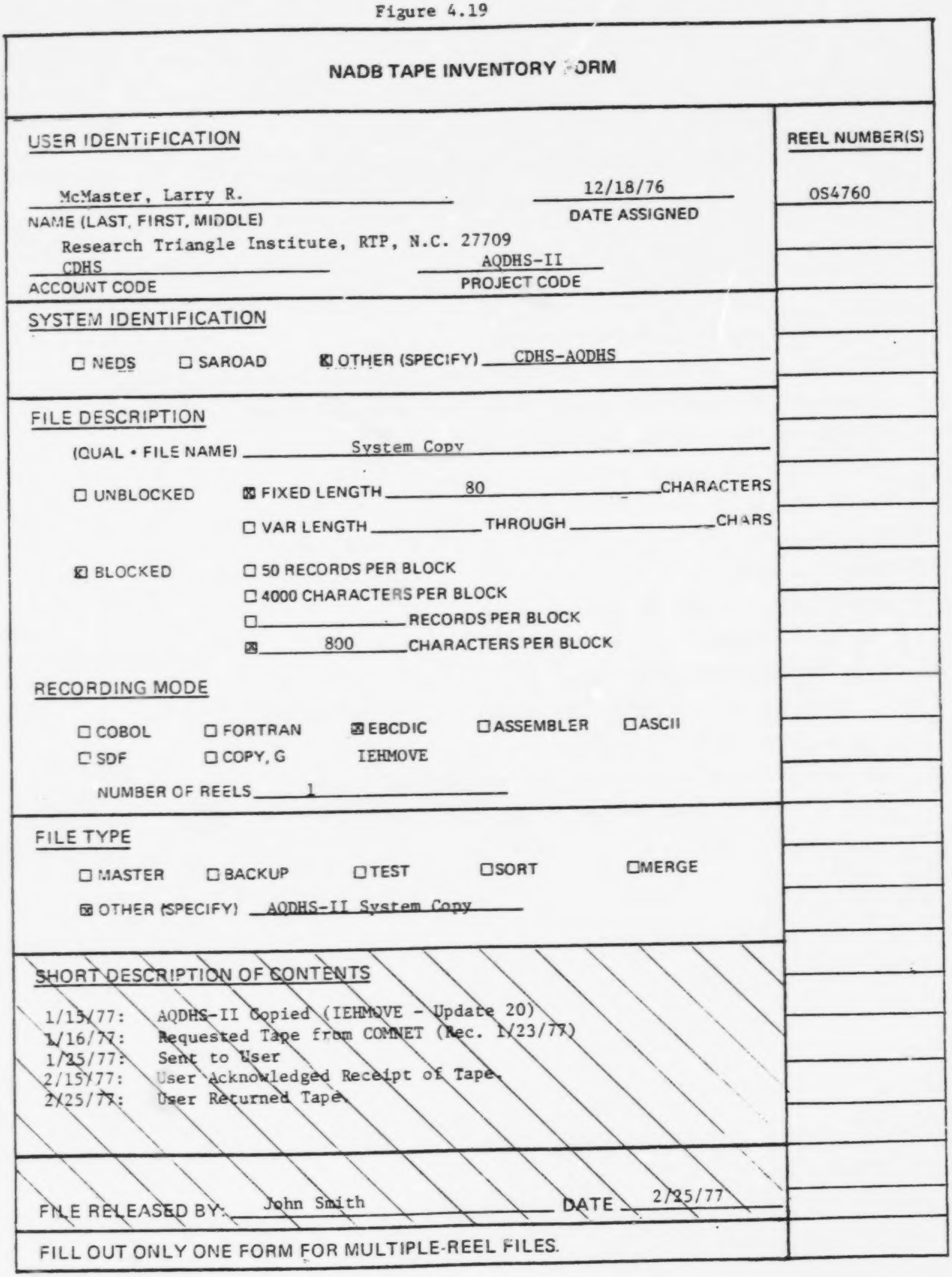
Figure 4.19



NADB TAPE INVENTORY FORM

REEL NUMBER(S)

0S4760

USER IDENTIFICATION

McMaster, Larry R.
NAME (LAST, FIRST, MIDDLE)

12/18/76
DATE ASSIGNED

Research Triangle Institute, RTP, N.C. 27709

CDHS
ACCOUNT CODE

AQDHS-II
PROJECT CODE

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) CDHS-AQDHS

FILE DESCRIPTION

(QUAL • FILE NAME) System Copy

☐ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS

☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED ☐ 50 RECORDS PER BLOCK

☐ 4000 CHARACTERS PER BLOCK

☐ ______ RECORDS PER BLOCK

☒ 800 CHARACTERS PER BLOCK

RECORDING MODE

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII

☐ SDF ☐ COPY, G IEHMOVE

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE

☒ OTHER (SPECIFY) AQDHS-II System Copy

SHORT DESCRIPTION OF CONTENTS

1/15/77: AQDHS-II Copied (IEHMOVE - Update 20)
1/16/77: Requested Tape from COMNET (Rec. 1/23/77)
1/25/77: Sent to User
2/15/77: User Acknowledged Receipt of Tape.
2/25/77: User Returned Tape.

FILE RELEASED BY: John Smith DATE 2/25/77

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

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Figure 4.20

Checklist for Initial Distribution - WCC Supplied Tape

Date/Initials

1. Add users name to distribution lists ______
2. Call WCC tape librarian to reserve tape, record in tape log ______
3. Create a tape copy deck using preassigned decks as guide ______
4. Copy system onto tape, record in tape log ______
5. Verify copy was successful ______
6. Notify WCC by phone to return tape ______
7. When tape is returned, put AQSTAP or PNRTAP label on it, record in tape log ______
8. Create installation deck for user ______
9. Type cover letter for the particular subsystem ______
10. Send installation decks (with listing), tape, and letter to user; inform user it is his responsibility to return tape to NADB; record in tape log ______
11. User notifies NADB that he has installed system and/or returns tape to NADB, record in tape log ______
12. Return tape to WCC, record in tape log ______

Figure 4.21

Checklist for Initial Distribution - User Supplied Tape

Date/Initials

1. Add users name to distribution lists ________
2. Assign tape label to users tape - record in tape log ________
3. Type cover letter for transmitting tape to WCC ________
4. Send tape and cover letter to WCC, record date in tape log ________
5. Make sure an appropriate deck to copy system is available, if not, create one. ________
6. Copy subsystem onto tape, record in tape log ________
7. Verify copy was successful ________
8. Notify WCC by phone to return tape ________
9. When tape is returned, put AQSTAP or PNRTAP label on it, record in tape log ________
10. Create installation deck for user ________
11. Type cover letter for the particular subsystem ________
12. Send installation deck, tape copy, and letter to user, record date in tape log ________
13. User notifies NADB that he has installed system ________

Clearly, there needs to be both a tracking method by which the current location, contents, and other specifics can be determined for each tape in the system as well as a recording method through which the history of any tape in the system pool can be maintained. In order for EPA to have access to relevant information about the tapes that are being or have been used for CDHS, each usage of any such tape should be recorded on a NADB Tape Inventory Form. The activity of each tape used in the system should be noted on this form, regardless of whether that tape belongs to EPA, the CDHS user, or a computer installation.

Generally, a separate NADB Tape Form should be filled out, not only for each reel number, but also for each distinct usage period of a reel. Two periods of use of a particular tape represent distinct usages when the contents of the tape differ from one period to the other or when the tape's user changes from the first to the second period. For each tape usage, the corresponding tape form should contain the following information: (1) the reel (volume serial) number; (2) the user's name and address; (3) the date the tape was assigned to this particular usage; (4) a description of the contents; (5) blocking and recording mode information; and (6) each date that the tape was transferred between EPA and any computer installation or the user.

At any given time, all the NADB forms that are being or have been used fall into two categories: (1) an active file, consisting of all forms which correspond to tapes which are currently being used; and (2) an inactive file, consisting of the remaining forms which correspond to tapes not currently being used. A special situation occurs for a particular tape when there is no form corresponding to it in the active file; this means, of course, that the tape is not presently being used. If the tape is still in EPA's possession, it is designated as an available tape and may be put to any new usage when the need arises. A record should be kept of those tapes that are in the available pool at any given time.

For clarification, refer to the following two example NADB forms. Figure 4.22 is an inactive form for reel number SRD212, as indicated by the fact that the tape librarian signed and dated the 'file released' portion at the bottom of the form. Figure 4.23 shows that the same reel was assigned a second usage

Figure 4.22
(Inactive Form)

NADB TAPE INVENTORY FORM

REEL NUMBER(S)
SRD212

USER IDENTIFICATION

NAME (LAST, FIRST, MIDDLE): Prichard, William D.
DATE ASSIGNED: 10/17/76

Central Data Systems
ACCOUNT CODE: 123 Knox Drive, Benwick, Arizona 85120
PROJECT CODE:

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) AQDHS-II (Update 25)

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS Update (AQDHS-II Update 25)

☐ UNBLOCKED ☐ FIXED LENGTH ______ CHARACTERS
☐ VAR LENGTH ______ THROUGH ______ CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☒ 8000 CHARACTERS PER BLOCK

RECORDING MODE No Labels

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) CDHS Update (AQDHS-II Update 25)
IEBUPDTE

SHORT DESCRIPTION OF CONTENTS AQDHS-II (Update 25)

10/17/76: Sent to TUCC
10/21/76: Returned from TUCC
10/22/76: Sent to NCC (B# - B174JS)
10/23/76: Returned from NCC
10/23/76: Sent to User
11/02/76: Returned by User

FILE RELEASED BY: John Sanders DATE 11/02/76

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

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Figure 4.23
(Active Form)

NADB TAPE INVENTORY FORM

REEL NUMBER(S)

SRD212

USER IDENTIFICATION

Johnson, Morris R.
NAME (LAST, FIRST, MIDDLE)

11/09/76
DATE ASSIGNED

Premier Environmental Group
700 Banner Road, Gate City, Florida 33777
ACCOUNT CODE
PROJECT CODE

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) Florida AQDHS-II Master

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS File (AQDHS-II Master - Florida)

☒ UNBLOCKED
☐ FIXED LENGTH ______ CHARACTERS
☒ VAR LENGTH 40 THROUGH 190 CHARS

☐ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☐ ______ CHARACTERS PER BLOCK

RECORDING MODE No Labels

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE

☒ OTHER (SPECIFY) CDHS File (AQDHS-II Master - Florida)
Created by AQDHS-II Subsystem

SHORT DESCRIPTION OF CONTENTS Florida AQDHS-II Master File
(70,500 Records)

11/09/76: Sent to User
11/28/76: Returned from User
11/28/76: Sent to COMNET

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

one week after it was released from the usage in Figure 4.22. During the intervening week between release from first usage and assignment to second usage, SRD212 was in the available pool. Figure 4.23 is an example of an active form.

When an available tape is assigned a usage, an active form is created. The reel number is recorded in the designated area in the upper right corner. The date is recorded in the 'date assigned' area. In the 'user identification' section, the name and address of the user who will receive the tape is recorded. Should a particular tape usage be solely for EPA, the appropriate personnel name at the agency may be used instead of a regular user's name. Normally, CDHS tapes do not require 'account code' and 'project code' information in the corresponding spaces. Note that the contents of the file are described in four different sections: the 'system identification' section, the 'file description' section, the 'file type' section, and the section labeled 'short description of contents.' In the hatched portion of Figure 4.24, the tape contained a CDHS update; in the hatched portion of Figure 4.25, it contained a user's data file. Other possible types of tape contents include copies of one of the CDHS subsystems and copies of test job streams for the system.

Other kinds of information for which no section is presently set aside on the NADB form may be inserted in convenient areas on the form. For example, the labeling characteristics of the tape (whether it has standard labels, non-standard labels, or no labels) may need to be recorded. In Figures, (4.24 and 4.25) this information is given between the 'file description' and the 'recording mode' sections. Another valuable bit of information is the procedure used to copy the contents onto the tape. In the examples, this was inserted on the bottom line of the 'file type' section. Normally, an update tape (see the hatched portion of Figure 4.26) is created using the IEBUPDTE utility. A CDHS data file (see the hatched portion of Figure 4.27) is created by the appropriate subsystem, either AQDHS-II or EIS/P&R. As a third example, a tape copy of either the AQDHS-II or the EIS/P&R

Figure 4.24
(Active Form)

NADB TAPE INVENTORY FORM

REEL NUMBER(S)

SRD212

USER IDENTIFICATION

Johnson, Morris R.
NAME (LAST, FIRST, MIDDLE)

11/09/76
DATE ASSIGNED

Premier Environmental Group
700 Banner Road, Gate City, Florida 33777
ACCOUNT CODE
PROJECT CODE

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) AQDHS-II Update 20

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS (AQDHS-II Update 20)

☒ UNBLOCKED ☒ FIXED LENGTH 80 CHARACTERS
☐ VAR LENGTH ______ THROUGH ______ CHARS

☐ BLOCKED ☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☒ 8000 RECORDS PER BLOCK
☐ ______ CHARACTERS PER BLOCK

RECORDING MODE

No Labels

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) CDHS (AQDHS-II Update 20)
IEBUPDTE

SHORT DESCRIPTION OF CONTENTS

AQDHS-II Update 20

11/09/76: Sent to TUCC
11/28/76: Returned from TUCC
11/28/76: Sent to COMNET

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

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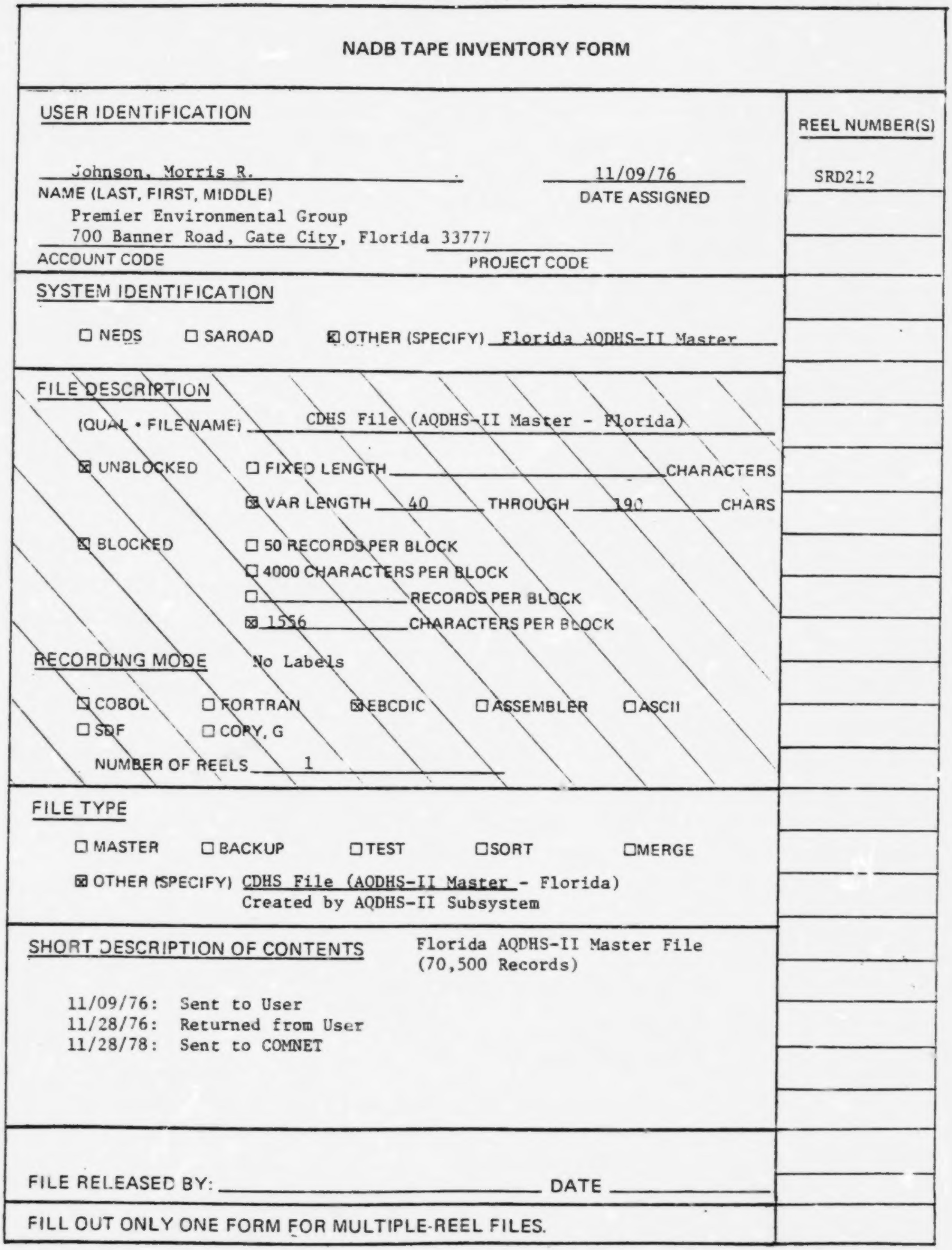
Figure 4.25
(Active Form)



NADB TAPE INVENTORY FORM

USER IDENTIFICATION

Johnson, Morris R.
NAME (LAST, FIRST, MIDDLE)

11/09/76
DATE ASSIGNED

Premier Environmental Group
700 Banner Road, Gate City, Florida 33777
ACCOUNT CODE

PROJECT CODE

REEL NUMBER(S)

SRD212

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) Florida AQDHS-II Master

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS File (AQDHS-II Master - Florida)

☒ UNBLOCKED ☐ FIXED LENGTH ____ CHARACTERS
☒ VAR LENGTH 40 THROUGH 190 CHARS

☒ BLOCKED ☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ____ RECORDS PER BLOCK
☒ 1556 CHARACTERS PER BLOCK

RECORDING MODE No Labels

☒ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) CDHS File (AQDHS-II Master - Florida)
Created by AQDHS-II Subsystem

SHORT DESCRIPTION OF CONTENTS Florida AQDHS-II Master File
(70,500 Records)

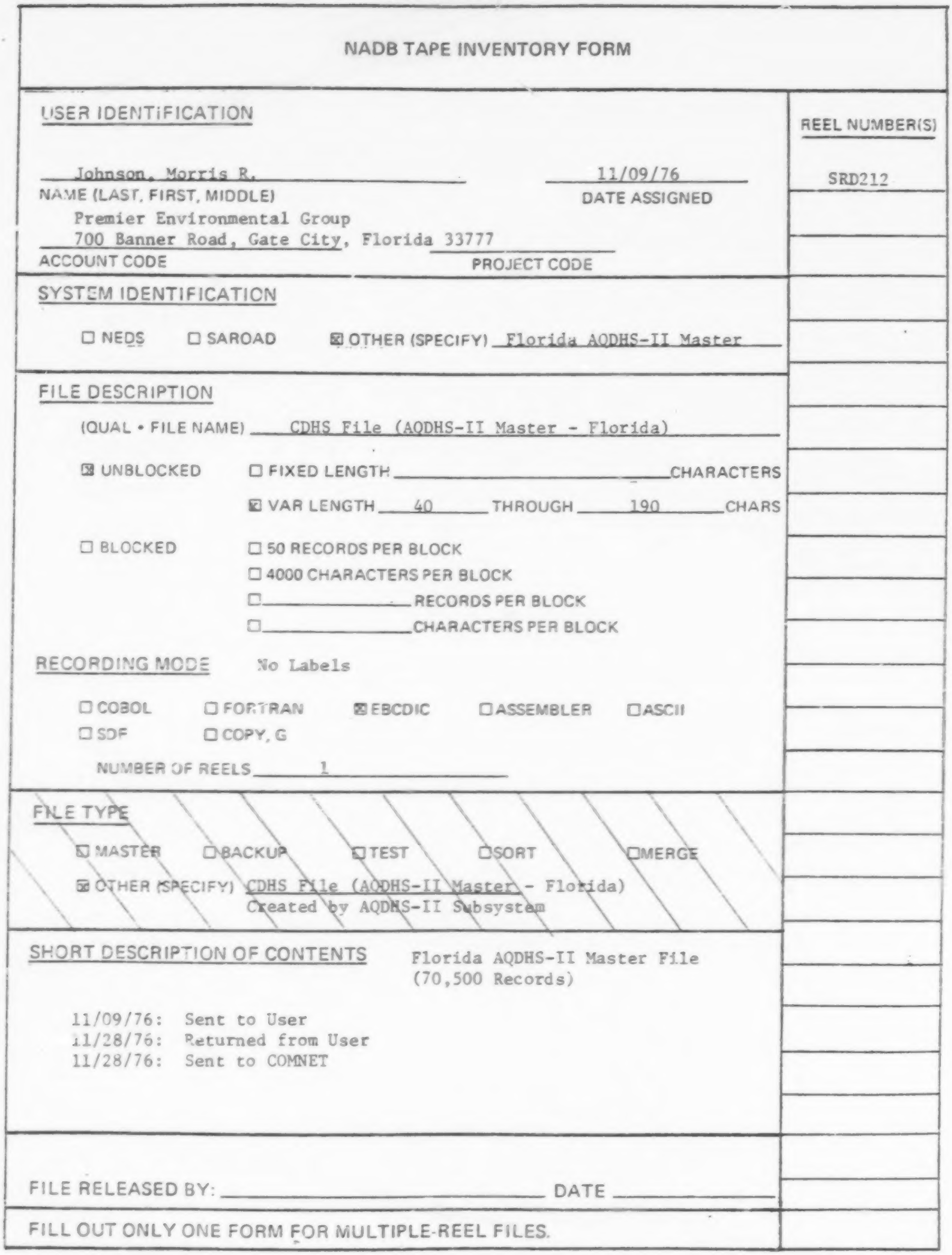
11/09/76: Sent to User
11/28/76: Returned from User
11/28/78: Sent to COMNET

FILE RELEASED BY: ____ DATE ____

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

Figure 4.26
(Active Form)



NADB TAPE INVENTORY FORM

USER IDENTIFICATION

Johnson, Morris R.
NAME (LAST, FIRST, MIDDLE)

11/09/76
DATE ASSIGNED

Premier Environmental Group
700 Banner Road, Gate City, Florida 33777
ACCOUNT CODE
PROJECT CODE

REEL NUMBER(S)

SRD212

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) Florida AQDHS-II Master

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS File (AQDHS-II Master - Florida)

☒ UNBLOCKED
☐ FIXED LENGTH ______ CHARACTERS
☒ VAR LENGTH 40 THROUGH 190 CHARS

☐ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ______ RECORDS PER BLOCK
☐ ______ CHARACTERS PER BLOCK

RECORDING MODE No Labels

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY, G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) CDHS File (AQDHS-II Master - Florida)
Created by AQDHS-II Subsystem

SHORT DESCRIPTION OF CONTENTS Florida AQDHS-II Master File
(70,500 Records)

11/09/76: Sent to User
11/28/76: Returned from User
11/28/76: Sent to COMNET

FILE RELEASED BY: ______ DATE ______

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

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Figure 4.27
(Active Form)

NADB TAPE INVENTORY FORM

USER IDENTIFICATION

Johnson, Morris R.
NAME (LAST, FIRST, MIDDLE)

11/09/76
DATE ASSIGNED

Premier Environmental Group
700 Banner Road, Gate City, Florida 33777
ACCOUNT CODE

PROJECT CODE

REEL NUMBER(S)

SRD212

SYSTEM IDENTIFICATION

☐ NEDS ☐ SAROAD ☒ OTHER (SPECIFY) Florida AQDHS-II Master

FILE DESCRIPTION

(QUAL • FILE NAME) CDHS File (AQDHS-II Master - Florida)

☒ UNBLOCKED
☐ FIXED LENGTH ____ CHARACTERS
☒ VAR LENGTH 40 THROUGH 190 CHARS

☒ BLOCKED
☐ 50 RECORDS PER BLOCK
☐ 4000 CHARACTERS PER BLOCK
☐ ____ RECORDS PER BLOCK
☒ 1556 CHARACTERS PER BLOCK

RECORDING MODE No Labels

☐ COBOL ☐ FORTRAN ☒ EBCDIC ☐ ASSEMBLER ☐ ASCII
☐ SDF ☐ COPY. G

NUMBER OF REELS 1

FILE TYPE

☐ MASTER ☐ BACKUP ☐ TEST ☐ SORT ☐ MERGE
☒ OTHER (SPECIFY) CDHS File (AQDHS-II Master - Florida)
Created by AQDHS-II Subsystem

SHORT DESCRIPTION OF CONTENTS Florida AQDHS-II Master File
(70,500 Records)

11/09/76: Sent to User
11/28/76: Returned from User
11/28/76: Sent to COMNET

FILE RELEASED BY: ____ DATE ____

FILL OUT ONLY ONE FORM FOR MULTIPLE-REEL FILES.

EPA(RTP)406

subsystem may be a sequential copy for a non IBM-OS user, or may be created using the IEHMOVE utility if the subsystem copy is for an IBM-OS user.

Finally, it may be seen from the two examples that the history of a tape's transmissions, under 'short description of contents,' includes the tape transmittal date as well as the sender and/or receiver. This information is recorded not only when the tape is transmitted between a CDHS user and EPA but also when it is transmitted between EPA and one of the computer installations used (e.g., TUCC, NCC, or COMNET) by EPA. Note that when a tape is sent to NCC, the identifying B-number (an external label assigned to the tape by NCC) should be recorded with the date the tape was transferred to NCC. The B-number is a 6-character string in which the first character is always 'B,' the next 3 characters comprise a 3-digit sequence number, and the last two characters are the initials of the person who submits the tape to NCC.

4.2 General Update Procedures

When a change to one of the CDHS subsystems is found to be necessary, a thorough check of all programs in the subsystem should be made to determine which programs require modifications. After consultation with the Project Officer, the changes should be made and tested.

If any changes in documentation are necessary, they should be made and submitted to the Project Officer prior to acceptance testing. Once program changes and any necessary documentation changes are completed, the changes should be installed on the Baseline System at the Washington Computer Center (WCC) IBM 370 in Washington, D.C., and the EPA UNIVAC 1110 at Research Triangle Park, N.C. Then, the Project Officer supervises a series of acceptance tests for the subsystem on the baseline version at WCC. These tests are general in nature and are designed to exercise each program in the system. Tests or additional test data should be added to exercise new changes made in the programs.

The update is assigned a number. Updates to each subsystem are numbered sequentially beginning with 1. This number serves as a means of identification and easy reference.

Once the acceptance tests are completed and any documentation changes approved, the update should be prepared for distribution. The documentation changes can be sent to the printer at this time.

Internal checklists for the update procedure can be found in Figure 4.28 for tapes and Figure 4.29 for card decks.

4.2.1.1 Preliminary Update Procedures

The Update Tracking Form (Figure 4.30) is used to follow the distribution of the update. Prior to distribution, mailing labels will be produced for the appropriate subsystem. (See Section 4.3 for details on the mailing labels.) Each label is attached to a tracking form. Information on the installations hardware and software configurations is recorded on the form. Such information can be obtained from the user survey. This information is beneficial in the production of an update that will be most easily handled by the user's installation. Special instructions (such as "Letter Only") should also be recorded prior to distribution, or as it becomes available.

Most of the programs in the system have update messages (see Figure 4.31). Any program which is changed should have this message updated (or added if it is not already in the program). These messages allow persons performing trouble shooting services on a subsystem to know at a glance whether all updates have been installed for a given program.

It is recommended that any program or JCL PROC that has more than a few statements changed be completely replaced. The baseline version of the system has IEBUPDTE (IBM utility) generated line numbers in columns 73-80 of the record. These line numbers can be used by non-IBM users to indicate where changes are to be made in their source code. The line numbers will only be correct if no non-EPA modifications to the system have been made by the users. In addition, users are warned that modifications need to be made sequentially to the system. Should the user desire to make modifications for his own purposes, these should be done to a copy of the baseline, keeping their baseline intact.

4.2.1.2 Tape Procedures

For large updates (greater than 500 statements), magnetic tapes are used to distribute the updates. At the present time, about 50 tapes are needed to distribute an update to one subsystem. These tapes are checked out from the NADB tape library. Standard, unlabeled, 9-track tapes recorded at 1600 BPI are used unless an installation specifies otherwise. The users are requested to return these tapes to the Project Officer at NADB as soon as they have

Figure 4.28

CHECKLIST FOR TAPE UPDATES

Date/Initials

1. Submit documentation changes (if any) to Project Officer ________
2. Update baseline subsystem ________
3. Conduct acceptance tests in conjunction with the Project Officer ________
4. Create master copy of update tape ________
5. List contents of master update tape ________
6. Send documentation to printer ________
7. Obtain tapes from the tape library or NADB ________
8. Initiate update tracking form for each user ________
9. Assign tape to each user - record on update tracking form ________
10. Create copy of master tape for each user - record on update tracking form ________
11. List each update tape - record date on update tracking form ________
12. Create master update card deck ________
13. Copy master update card deck for each user ________
14. List each update card deck ________
15. Generate mailing labels for all users ________
16. Type update cover letter ________
17. Reproduce update cover letter for all users ________
18. Reproduce update verification forms for all users ________
19. List tape contents of each user's tape ________
20. Assemble update packages - check off contents on update tracking form ________
21. Reproduce update tracking form to send with package - keep original in file ________
22. Mail packages ________
23. When update verification form and/or tape returned, record on update tracking form ________

Figure 4.29

CHECKLIST FOR CARD DECK UPDATES

Date/Initials

1. Submit documentation changes (if any) to Project Officer ________
2. Update baseline subsystem ________
3. Conduct acceptance tests in conjunction with the Project Officer ________
4. Create and list master copy of update deck ________
5. Send documentation to printer ________
6. Initiate update tracking forms for each user ________
7. Copy master card deck for each user ________
8. List each card deck - record date ________
9. Generate mailing labels for all users ________
10. Type update cover letter ________
11. Reproduce update cover letter for all users ________
12. Reproduce verification forms for all users ________
13. Assemble update packages - check off contents on update tracking form ________
14. Reproduce update tracking form to send with package, keep original in file ________
15. Mail update packages ________
16. When update verification form returned, record on update tracking form ________

Figure 4.30

UPDATE TRACKING FORM

Update #: ______________

Date: ____________________

Tape #: __________________

Name:

Attributes: ______________

Date Copied: ______________________

Date Listed: __________________

Date Mailed to User: ______________

Date Returned: ________________

Update # ____________ Returned: YES _____ NO _____

Type of Hardware:

Software Configuration:

Special Instructions:

Tape Enclosed: ____________________

Update Deck Listing: _________

Tape Listing: _____________________

Tape Contents: _______________

Update Verification Form: __________

Update Tracking List: ________

Documentation: ____________________

Update Cover Letter: _______________

Problem Reporting Form: ____________

Update Deck: _______________________

Figure 4.31
Sample Update Messages

```
PROGRAM NAME: TXTNEDIT
REVISION LEVEL: 3-00
LAST UPDATE #: 20 - NEGATIVE DATA
INCORPORATED: JUNE 1, 1977
```

installed the update. The tapes are logged on the NADB tape inventory forms as well as on the update tracking forms.

At this point, a list of the number of different types of update data sets needed can be made. At present, these data sets are being produced in three versions (IBM IEBUPDTE, non-IBM IEBUPDTE, and UNIVAC depending on the user's computer hardware/software). In the future, it is planned that additional versions, such as a Honeywell version, can be produced. From the hardware and software configurations of the user, it can be determined which version to send them. The WCC baseline version of CDHS uses the standard IBM (OS) partitioned data sets to store the program source and load modules, as well as the JCL procedures. The IBM utility IEBUPDTE provides a satisfactory method for updating a partitioned data set; therefore, one version of the update is for IBM users. It contains the IEBUPDTE control cards as part of the data set. The second version is for non-IBM users or those users who employ means other than partitioned data sets (such as PANVALET or ADR Librarian). This version contains only the actual updated modules and not IEBUPDTE control cards. A third version is for UNIVAC users. A copy of the baseline system has been installed at the EPA UNIVAC 1110 in the Research Triangle Park, N.C. This system is used to generate UNIVAC updates.

A master update tape is created for each version of the update. It is recommended that for very large updates, several files be used on the tape for ease of installation. It is suggested that a separate file be used for each source program, plus one for JCL procedures. Once the master tapes have been created, they are listed using the COPY utility at TUCC (see Figure 4.32); however, any local print utility may be used to provide a listing of the update tape.

All tapes sent to users are created from the master tapes using a tape copy program (see Figure 4.33). Each tape is assigned to a user on an update tracking form prior to being copied. The date copied is entered on the form. It is possible that some tapes will need to be initialized prior to being used. Once the tape is copied, it should be listed using the COPY utility (see Figure 4.32) with the listing date recorded on the tracking form. The listing should be visually checked for verification. The listing and tape should be labeled so that the correct listing for each tape will be sent.

Figure 4.32

Tape Listing JCL

```
//SRD0081 JOB RTI.C41,P00000,FRANKE,T=10,PRTY=1,P=999,                  00000100
//   FORMS=GT150                                                         00000200
// EXEC COPY                                                             00000300
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(1,NL),             00000400
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00000500
// DISP=(OLD,PASS)                                                       00000600
// EXEC COPY                                                             00000700
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(2,NL),             00000800
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00000900
// DISP=(OLD,PASS)                                                       00001000
// EXEC COPY                                                             00001100
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(3,NL),             00001200
// DISP=(OLD,PASS),                                                      00001300
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000)                                  00001400
// EXEC COPY                                                             00001500
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(4,NL),             00001600
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00001700
// DISP=(OLD,PASS)                                                       00001800
// EXEC COPY                                                             00001900
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(5,NL),             00002000
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00002100
// DISP=(OLD,PASS)                                                       00002200
// EXEC COPY                                                             00002300
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(6,NL),             00002400
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00002500
// DISP=(OLD,PASS)                                                       00002600
// EXEC COPY                                                             00002700
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(7,NL),             00002800
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00002900
// DISP=(OLD,PASS)                                                       00003000
// EXEC COPY                                                             00003100
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD0081),LABEL=(8,NL),             00003200
```

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Figure 4.32 (Continued)

```
// DISP=(OLD,PASS),                                                      00003300
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000)                                  00003400
// EXEC COPY                                                             00003500
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(9,NL),              00003600
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00003700
// DISP=(OLD,PASS)                                                       00003800
// EXEC COPY                                                             00003900
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(10,NL),             00004000
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00004100
// DISP=(OLD,PASS)                                                       00004200
// EXEC COPY                                                             00004300
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(11,NL),             00004400
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00004500
// DISP=(OLD,PASS)                                                       00004600
// EXEC COPY                                                             00004700
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(12,NL),             00004800
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00004900
// DISP=(OLD,PASS)                                                       00005000
// EXEC COPY                                                             00005020
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(13,NL),             00005030
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00005040
// DISP=(OLD,PASS)                                                       00005050
// EXEC COPY                                                             00005060
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(14,NL),             00005070
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00005080
// DISP=(OLD,PASS)                                                       00005090
// EXEC COPY                                                             00005100
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(15,NL),             00005110
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00005120
// DISP=(OLD,PASS)                                                       00005130
// EXEC COPY                                                             00005140
//INPUT DD UNIT=TAPE,VOL=(,RETAIN,SER=SRD081),LABEL=(16,NL),             00005150
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=4000),                                 00005160
// DISP=(OLD,PASS)                                                       00005170
```

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Figure 4.33

Tape To Tape Copy JCL

```
//TPCOPY JOB RTI,C44,P02069,MCMASTER,T=1,PRTY=2                        00000010
//  EXEC TPVOLCPY                                                      00000020
//INPUT  DD UNIT=TAPE,DISP=OLD,LABEL=(,NL),VOL=SER=SRD093              00000030
//OUTPUT  DD UNIT=TAPE,DISP=OLD,LABEL=(,NL),VOL=SER=SRD039,RING=IN     00000040
```

A table (see Figure 4.34) showing the contents of each file on the tape, the number of records, and the user file to be updated (source, load, JCL, etc.) should be typed for each update version.

An update card deck will be created for each version of the update. Copies of these decks and listings of them will be made as detailed under Card Updates, 4.2.1.3.

4.2.1.3 Card Update Procedures

For updates with a minimal number of records being changed, cards can be used to distribute the update. A card deck is created that contains both the JCL to install the update and the update cards themselves.

The master deck is then copied and listed on the UNIVAC 1110 as seen in Figure 4.35. The listings should be carefully checked for correctness and stored with its proper card deck.

The tracking form can be used for card updates, ignoring any references to tape number.

It is not important to have separate card versions for IEBUPDTE users and non-IEBUPDTE users as it is easy to manually remove cards from a card deck. A separate UNIVAC version should be created, however, since these source programs do differ slightly from the IBM baseline versions in the Environment and Data Division.

The same copying procedure is used for creating update decks for tape updates.

4.2.1.4 Other Forms

An update verification form (see Figure 4.36) is sent to each installation. This form should be returned to NADB once the user has installed the update. It also allows the user to notify NADB of personnel changes. All copies showing personnel changes plus the most recently returned form are kept in an active file (see Appendix D).

An update cover letter (see Figure 4.37) is written by the Project Officer, providing information on how to install the update and detailing changes made by the update.

Each item is checked off on the update tracking form as it is put into the update package. A copy of the tracking form should also be enclosed. Mailing labels are generated using the procedures described in Section 4.3 and the

Figure 4.34

CONTENTS OF UPDATE 20 TAPE

FILE #	PROGRAMS	# OF RECORDS	UPDATE FILE
2	AQSRTRCL, AQSRTRGO, AQSCNVRT	253	JCL
3	ADMERGE	393	SOURCE
4	ADCONVRT	879	SOURCE
5	CDCONVRT	1027	SOURCE
6	DDSTATIS	988	SOURCE
7	EDRPTLST	4084	SOURCE
8	FDFILMNT	2870	SOURCE
9	HDTABLE1	789	SOURCE
10	IDSLDAVG	1444	SOURCE
11	IDLNGPRC	2465	SOURCE
12	MDSENTNL	455	SOURCE
13	NDSENTNL	438	SOURCE
14	PDSITE	241	SOURCE
15	SDPRINTS	2008	SOURCE
16	TDTREDIT	3164	SOURCE
17	Copy Members - RTRETRVR, RPREPEAT, RPSKCOMP, RPSLRCTL, RPSTDCTL, RPWRITCL, RPWRITES, GDMAXRDG, RDANSRCB, RDCNTLSW, RPUSERRT, RPWRAPIT, RPWRAPUP, RPWRITWK, RDERRMSG, RDSLCTLS, RDSLERMS, RDUSER01, RDWKMSTR, RPBLDNUL, RPDELTPD, RPGENREC, RPGMINIT, RPGMINTL, RPMAINRT, RPMAINSD, RPMVMSTR, RPQLINIT	1433	SOURCE

NOTE: File #1 is a dummy file and is not a part of this update.

Figure 4.35

GENERATION OF UPDATE DECKS

```
@RUN       (valid run card)
@ELT, IL TPF$.UPDAT

Update cards go here

@EOF
@ASG,CP P1.
@BRKPT  PUNCH$/P1
@PCH,S  UPDAT
@BRKPT  PUNCH$
@FREE   P1
@SYM    P1.,n,CP    where n is the number decks required
@FIN
```

Figure 4.36

UPDATE VERIFICATION FORM

Update No. ______________ Subsystem *(check one)*: ________ AQDHS-II ________ EIS/P&R

Date update performed: ______________________

Date affected programs recompiled: ______________________

Date affected programs link-edited: ______________________

PERSONNEL CHANGES

(For personnel on EPA mailing lists for update decks and letter, update letter only, Newsletter)

New employee *(name)*: ______________________

Assigned to *(check as appropriate)*: ________ AQDHS-II ________ EIS/P&R

Replaces *(name)*: ______________________

To receive *(check as appropriate)*: ________ Update decks and letter

________ Update letters w/o decks ________ Newsletter

New employee *(name)*: ______________________

Assigned to *(check as appropriate)*: ________ AQDHS-II ________ EIS/P&R

Replaces *[name])*: ______________________

To receive *(check as appropriate)*: ________ Updates decks and letter

________ Update letters w/o decks ________ Newsletter

(For additional listings, please use blank sheet.)

______________________ *(Signature)*

______________________ *(Title)*

______________________ *(Agency)*

______________________ *(Date)*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: SEP 30 1977

SUBJECT: AQDHS-II UPDATE 20

FROM: Lloyd Hedgepeth, Environmental Engineer
Systems Development Section, NADB (MD-14) LMH

TO: AQDHS-II USERS

Enclosed is the package for Update 20 to the AQDHS-II system. The Update Tracking Form shows what your package contains If the hardware or software information on the form is not correct for your installation, please notify me. This information will be used to provide you with an update package most suited to the needs of your installation.

This update was basically required in order to incorporate the negative meteorological data handling capability. However, there were a number of additional improvements made and several reported problem solutions are incorporated in this update. These are discussed in Attachment 1.

As many non-OS users have requested update tapes with each program in a separate file, and with no control cards, we have provided such a tape for those installations. Please note that on that tape, files 1 and 2, containing multiple programs, do contain control cards separating the COBOL copy members.

The actual contents of your tape will be shown on the tape contents sheet and in the listing printed from your tape.

An update deck is provided for those who use the standard IBM-OS utilities. In almost every installation your data set name (DSNAME) will not be the same as that on the //SYSUT1 and //SYSUT2 cards required for the IEBUPDTE utility. Be sure to change the DSNAME to your data set name on those cards in each step of the update. If the member name on the control card image which is contained on the enclosed tape (./ REPL NAME=XXXXXXXX, LIST=ALL) is not correct for your installation, this will have to be changed.

For those users not having IBM equipment, you can use your own update utility.

We have enclosed a revised trouble shooting form. We hope this one page form will be easier to use. Please use it when reporting any problems.

The baseline test series has been expanded to 53 test jobs. We feel that they better exercise the system. A copy of the test series may be obtained by returning the enclosed test series request form and a tape to which they can be copied.

EPA Form 1320-6 (Rev. 3-76)

Figure 4.37 (Continued)

Each user is reminded not to make program modifications to AQDHS-II other than those released or approved by NADB. Only the NADB version of AQDHS-II will be supported by NADB. All modified versions (unless authorized to meet a specific computer system problem) must be supported by the organization which performs the modification. NADB has begun a practice of inserting comments in the programs affected by updates. These comments will allow the user to inform NADB of the update status of a particular program in case of problems. The user is urged not to remove these comments as they will be modifications to the NADB version.

If you wish to make modifications for your own purposes, you should make them to a copy of the baseline system. You should, however, maintain the baseline system with no changes. This will give you an opportunity to test problems against the baseline. If you have a problem and the problem is reproduced in the baseline, please report the problem to NADB. If the problem occurs in the modified version only, it is the user's responsibility to correct that problem.

Please fill out the enclosed Update Verification Form and return it to me. Return the tape to NADB as soon as possible.

If you need further assistance or additional information, please contact Mr. Lloyd Hedgepeth at (919) 541-5491, or Mr. Larry McMaster at (919) 541-6821.

Enclosures

Figure 4.37 (Continued)

ATTACHMENT 1

Problems Resolved and Improvements Incorporated in Update 20 to AQDHS-II

A. General Problems

1. The update messages have been incorporated into all programs affected by this update.

2. All the programs were compiled and run on the UNIVAC 1110 and all general errors resulting from Update 18 have been resolved. These errors were tolerated by an IBM compiler but caused severe problems for a UNIVAC compiler. The UNIVAC related problems were:

   a) "01" appearing in the B margin

   b) Logical "IF" statements were too complex for the UNIVAC compiler to handle

   c) Empty paragraphs

   d) Invalid sentence continuation

   e) Failure to close all files

   f) Mixed mode moves (i.e., alphameric to numeric, etc.)

   g) Use of "FILLER" at the group level

   h) Use of recursive subroutine calls.

B. Specific Program Problems

1. AXCONVRT - Modified the summary statistics to delete the count for the number of SAROAD ADD transactions with all null readings.

2. CXCONVRT

   a) Incorporated a "LIST" option of valid transactions (default is "NOLIST").

   b) Standardized the error messages.

   c) Included the number of action cards ("$" cards) in the summary statistics.

Figure 4.37 (Continued)

3. DXSTATIS

    a) Standardized the error messages.

    b) Provided summary statistics.

    c) Since the negative data mods altered the internal file format in a manner which is not compatible with FORTRAN, the sentinel programs (MXSENTNL and NXSENTNL) must now be run prior to execution of DXSTATIS to reformat the file to be FORTRAN compatible. Otherwise DXSTATIS will abort the run.

4. EXRPTLST

    a) Expanded the print line to 132 characters since there was no negative response to this modification as discussed in Volume I, No. 6 of the Users Bulletin.

    b) Incorporated the minimum detectable value in the report header.

    c) Corrected the method used to obtain the maximum raw data value.

    d) Modified the mean value calculations routine to provide round off instead of truncation. Printed values from the COBOL and FORTRAN programs should now match exactly.

5. FXFILMNT

    a) Expanded the summary statistics to indicate the number of readings flagged for deletion.

    b) Provided a negative value table for the "LIST" option since the list option shows the data field with the negative sign as an overpunched character. This table allows the user to readily interpret the data value.

    c) Corrected the technique used in processing composite data.

6. IXSLDAVG - Corrected a subscripting problem which resulted from Update 18.

7. PXSITE

    a) Added title line.

    b) Decreased number of lines per page.

8. SXPRINTS

    a) Prints two sites per page to save paper.

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b) Prints the minimum detectable value and the number of times it was substituted.

9. TXTREDIT

   a) Performs an edit check on the data for all parameters for which SAROAD has a maximum value check. The values which exceed the maximum value check are now accepted by AQDHS-II and a non-suppressible warning message is printed.

   b) Corrected several error messages.

   c) Added additional edit checks for negative data.

   d) Any Form 2 or 3 repeating data which is in error will not appear on the list of valid transactions (using the LIST option). However, the data in error is listed in the diagnostic listing with its appropriate error messages.

   e) Edit checks for the entire matrix of SAROAD start hour versus sampling interval have been included.

10. RTRETRVR - Corrected the wrap-around feature for the sliding average mode from Update 18.

C. Additional Procedures

1. A procedure AQSRETCL was added to allow the user to compile, link edit, and save standard retrievals in the LOAD library. This saves the user the expense of recompiling and linking his standard retrievals each time they are needed.

2. Procedure AQSRETGO was added to allow for execution of retrievals stored in the LOAD library.

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update packages are included. The tracking forms are then kept as a record of the update being sent. When the user returns the update tape to NADB, the date is recorded on the tracking form.

4.3 Procedures for Maintaining Mailing Label Files

When a requestor contacts NADB for a copy of a CDHS subsystem, AQDHS-II and/or EIS/P&R, the requestor's name and address are added to the appropriate distribution lists, AQDHS-II or EIS/P&R updates, and the CDHS User's Bulletin, which reside on a mass storage device on EPA's UNIVAC 1110 computer located at the Research Triangle Park, North Carolina. These files are edited using the UNIVAC System EDIT processor.

Using James Rogers as an example requestor, the following steps would be used to add his name to the distribution lists:

1. Sign onto the computer
2. `>@RUN (valid run card)`
3. `>@ED,U CDHS-MAIL.AQII/NAMES`

   (or EIS/NAMES or CDHS-NEWS.LETTER, depending on the file desired)
4. Locate the line where James Rogers should be entered alphabetically in the distribution list.

   ```
   >403
    +001  (the program prints line 403)
   403:>  (depress "return" to switch from Edit to Input mode)
   INPUT
   ```
5. Now the requestor's name, telephone number, and address can be entered using a maximum of 6 lines.

   ```
   404I:> 1 James Rogers  (404) 528-6379
   405I:> 2 568 Logan Lane
   406I:> 3 Atlanta, Georgia  30658
   407I:> +001
          (this last line should be added to specify the number
           of labels desired for this file name)
   408I:>  (depress "return" to switch from Input to Edit mode)
   EDIT
   ```
6. `>EXIT`

If James Rogers notified NADB that he was no longer using the CDHS subsystem, his name should be deleted from the appropriate distribution lists. Steps 1 - 3 would be followed as above. The remaining steps are shown below.

4. Locate James Rogers in the distribution list.

```
>L James Rogers
404: 1 James Rogers (404)528-6079  (the program prints the line)
>405
405: 2 568 Logan Lane  (the program prints line 405)
>406
406: 3 Atlanta, Georgia  30658
>407
407: +001
```

5. Now the entire name and address can be deleted in the following way:

```
>D 404 407
```

6. `>EXIT`

A change can be made to the distribtuion list. If, for example, James Rogers' street address changes, the following steps would be taken. Steps 1 - 3 would be followed as above.

4.

```
>L 568 Logan Lane
405: 2 568 Logan Lane   (the program prints the line)
```

5.

```
>R 2 618 Patterson Street   (This will replace the old address
                             with the new address)
```

6. `>EXIT`

To obtain a print-out of the distribution list, the following steps would be taken:

1. Sign onto the computer
2. `>@RUN` (valid run card)
3. `>@CAT,P` (print file).

```
Ready
```

4. `>@ASG,A` (print file).

```
Ready
```

```
5.    >@BRKPT PRINT$/(print file)  (no period)
6.    >@PRT,S  CDHS-MAIL.AQII/NAMES
                 (or EIS/NAMES or CDHS-NEWS.LETTER, depending
                  on the file desired)
7.    >@BRKPT  PRINT$
8.    >SYM,U  (print file).,2,PR
      (The 2 denotes the number of copies desired; null defaults to 1)
9.    >@FIN
```

Mailing labels are generated when a CDHS User's Bulletin, AQDHS-II or EIS/P&R updates are to be sent to the subsystem users. These mailing labels are produced by executing a standard NADB program (AE001) which uses the card image files stored on EPA's UNIVAC 1110 computer as input. The following procedure should be used to obtain the AQDHS-II mailing labels:

```
1.    Sign onto the computer
2.    >@RUN  (valid run card)
3.    >@ASG,A CDHS*CDHS-MAIL.
4.    >@COPY,S CDHS*CDHS-MAIL.AQII/NAMES,.AQII/LABELS
5.    >@CAT,P AQII-OUT.
6.    >@ADD,PL CDHS*CDHS-MAIL.AQII/MAIL
7.    >@FIN
```

The following procedure should be used to obtain the EIS/P&R mailing labels. Steps 1 - 3 would be the same as above.

```
4.    >@COPY,S CDHS*CDHS-MAIL.EIS/NAMES,.EIS/LABELS
5.    >@CAT,P PNR-OUT.
6.    >@ADD,PL CDHS*CDHS-MAIL.EIS/MAIL
7.    >@FIN
```

HARDWARE/SOFTWARE CONFIGURATIONS AND OTHER CHARACTERISTICS OF THE CDHS INSTALLATIONS

5.0 Overview

EPA should have the capability of providing service to each user of its Comprehensive Data Handling System at crucial periods in the operation of the system: (1) when the user's particular subsystem is installed; (2) whenever EPA distributes an update which is to be incorporated into the subsystem; and (3) whenever the user experiences difficulties in the operation of the subsystem which require EPA assistance. In order to achieve this capability, EPA must obtain the basic information, as well as any peculiarities of the operation of an installation, as soon as possible after it is determined that the installation site is to become a part of the CDHS network of users. This vital information includes the following areas of concern: (1) the particular subsystem being used at the site (either AQDHS-II or EIS/P&R); (2) the status of the installation of the subsystem (whether installation is still only planned, is in progress, or has been accomplished); (3) the hardware/software configuration and any special characteristics thereof; and (4) the names, addresses, and phone numbers of key air pollution control and data processing personnel associated with the installation.

To obtain this information from the user, a special four-page form (see Figure 5.1) was designed and sent to each current and new user of CDHS. This form is also supplied with initial distribution of CDHS software.

Appendix A provides the reader with the complete hardware/software configuration status as returned by each CDHS user; Figure 5.2 provides a breakdown by computer vendor.

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Figure 5.1

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency:

Address:

HARDWARE

Location:

	IBM	UNIVAC	Other (Specify)
Model Number			
Series Number			
Core size (specify words or bytes			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Figure 5.1 (Continued)

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ____________________

Task Order Expiration (date) ____________________

Operational since (date) ____________________

Installation in progress? Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No ________

By whom? ____________________

Task Order expiration (date) ____________________

Operational since (date) ____________________

Installation in progress Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

Figure 5.1 (Continued)

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: ______________________________

____

Agency: ______________________________

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

Figure 5.1 (Continued)

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ____

____

Address: ____

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ____

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ____

____

Address: ____

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ____

EIS/P&R Contact (person responsible for performing updates):

Name and Title: ____

____

Address: ____

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ____

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

____

____

Figure 5.2

Categorization of CDHS Users By Computer Vendor

Computer Vendor	Number of CDHS Users
AMDAHL	1
Control Data Corporation (CDC)	2
Honeywell	2
International Business Machines (IBM)	30
UNIVAC	4

TROUBLESHOOTING TECHNIQUES

6.0 Troubleshooting

When users encounter any unusual occurences in either of the Comprehensive Data Handling System (CDHS) subsystem packages, they normally report the problem to the National Air Data Branch (NADB). These problem areas are discussed in the following sections.

6.1 Possible Problem Areas

These problems can be classified as either user errors or program "bugs."

6.1.1 Faulty User Procedures

If the problem results from faulty user procedures (i.e., wrong version of the subsystem being used, incorrect data manipulations, or invalidated data) the user personnel should be instructed in the correct procedures. The user problem is the most common, and the most serious types of errors should be solved as quickly as possible.

6.1.2 Program "Bug"

If the problem is due to a program "bug" (a system error in one or more programs of a particular subsystem), RTI suggests that the following procedures which outline the techniques used in program trouble shooting be followed.

6.2 Troubleshooting Procedures

Upon notification from the EPA Project Officer that a problem exists, the following procedures should be followed to provide a comprehensive method of tracking a problem from its inception to its solution.

1. Approach Study
    a. Problem Statement
    b. Narrative of Solution
    c. Test Plan
    d. Implications
2. Program Coding and Compilations
3. Program Testing in a Backup System
4. Documentation Changes
5. Acceptance Testing in the Baseline Subsystem

These methods are further discussed in the following sections.

6.2.1 Approach Study

The following items of the Approach Study, appropriately labeled and dated, should be submitted for approval of the EPA Project Officer prior to initiation of any source coding modifications:

6.2.1.1 Problem Statement

The Problem Statement is a description of the problem to be corrected or the modification which is requested. The Problem Statement can be a restatement of the problem or the modification received from the EPA Project Officer or can provide further clarification of the problem. The Problem Statement should fully describe the problem or the modification.

6.2.1.2 Narrative of Solution

The Narrative of Solution should discuss a) the solution or modification to be implemented, being specific and referencing current program logic, and b) any consideration given to other solutions or modifications not recommended by the EPA Project Officer. The Narrative should be of sufficient detail to clearly outline the proposed code and logic changes which are to be made. Included in this part of the Approach Study should be any changes to formats (either input, output, or file modifications).

6.2.1.3 Test Plan

The Test Plan should indicate the test flowcharts and test data characteristics which should be used to test the new program logic. It should also indicate which of the baseline test jobs (see Appendix B for a description of the baseline test jobs and Appendix C for the test jobs) will be specifically used to thoroughly exercise the program modification. If there is no job in the baseline test jobs which adequately tests the program modification, a new test job should be created to provide adequate testing and should be integrated into the baseline test jobs along with a description of the new test job. Upon successful completion of the program testing, the Test Plan should include the execution of the entire baseline test job series unless specifically waived by the EPA Project Officer.

6.2.1.4 Implications

The Implications section should discuss the effects these proposed modifications will have on any other programs of the subsystem in question, program files, or procedures. If the proposed fix or modification will have no effect on any other software or procedures, it should be so stated.

6.2.2 Program Coding and Compilation

Since the programs in AQDHS-II and EIS/P&R are written using a top-down structured approach, any programming of additional programs or modifications to existing programs should be done using the top-down structured approach. In addition to using the top-down structured techniques of programming, all the program code should follow the standards as set forth by the American National Standards Institute (ANSI).

6.2.3 Program Testing

In order to ensure the integrity of the NADB baseline version of CDHS, all program testing should be conducted in a copy of the baseline subsystem. This testing should include not only specific program testing, but also the complete test job series should be run to determine the impact of the modification on the total subsystem.

6.2.4 Documentation Changes

The existing subsystem documentation should be reviewed to determine if the fix or modification requires a revision to the documentation. If it does, the revision should be distributed to the users of the affected subsystem.

6.2.5 Acceptance Testing in the Baseline Subsystem

After the program testing and documentation revisions have been initially accepted by the EPA Project Officer, the final acceptance testing in the NADB Baseline Subsystem should be run. Upon successful completion of this Acceptance Testing, computer cards (interpreted) or a tape of all programming changes which are made should be provided to the EPA Project Officer. A listing which clearly shows all lines of coding which were either inserted, changed, or deleted should also be supplied. If the changes are sufficiently extensive to require total program replacement, this shall be documented in a letter accompanying the tape and listings.

6.3 Problem Reporting Forms

Problem reporting forms (see Figure 6.1) are issued with each update, periodically in the CDHS USERS BULLETIN and upon request to all users of the Air Quality Data Handling Subsystem - Version Two (AQDHS-II) or the Emission Inventory Subsystem/Permits and Registration (EIS/P&R). This form was designed for the users of the subsystem as a guide in supplying pertinent information about the problem in order for NADB to expedite a solution.

6.3.1 Information Which Should Accompany Problem Reporting Forms

1) A compile listing of the program, including maps
2) JCL listing for the job
3) System log listing for the job
4) A listing of all in-stream JCL and input control cards
5) Total run listing
6) All diagnostic messages
7) Printout of program results
8) Copy of input and output files (OPTIONAL)

Often, a user calls one of the personnel listed in the CDHS USERS BULLETIN or writes a letter concerning the problem, but a problem reporting form and all necessary information should also be forwarded to NADB.

6.4 Procedures to Follow in Solution of Problem

Upon notification of a problem, the EPA Project Officer assigns a problem number (each subsystem has an individual sequence). The reported problem is then forwarded to the EPA contractor who is responsible for CDHS troubleshooting.

The problem is then studied to determine whether it is a user error or a system error which usually involves a bug in one or more programs of the subsystem.

Problems affecting the system are prioritized into three categories:

1) Low (does not affect the user or his file in a detrimental manner. These are minor problems, such as non-ANS COBOL usage.)
2) Medium (does not affect the user or his file in a detrimental manner, bur whose solution would clarify or enhance the use of the subsystem, such as the rounding differences between COBOL and FORTRAN.)
3) High (adversely affects the user or his file. All user-related problems are treated as high priority.)

The priority is set in conference with the Project Officer. Also, the time anticipated for producing a solution to the problem is estimated. If the solution will require more than 40 manhours, permission to work on the problem must be obtained from the Project Officer. If permission is not granted, all work on that problem is held until a future date. Otherwise, if a solution will take less than 40 manhours, or permission is obtained to work on a large problem, the problems are investigated in order of priorities. The decision to implement a program correction is frequently determined by the timing of other scheduled modifications to the subsystem.

In solving a reported problem, one should check the problem against the list of previously reported problems and the list of corrections made by previous updates to the system. It has been found that many problems can be solved quickly by checking against these two sources. The problem reporting form requests that the user apply all updates to the system prior to reporting a problem; however, in many cases, this has not been done.

If the problem cannot be solved from past troubleshooting experience as shown above, one should try to duplicate the problem on the CDHS baseline system.

Often, this requires the actual data in question to be submitted. If the problem cannot be duplicated on the baseline system, one should look for user modifications made to the problem program. One should also look for possible computer problems which cannot be corrected by modifying the CDHS. If the problem is duplicated, a program problem is likely, and should be investigated using standard debugging techniques.

Once the problem has been located, a solution must be found. Special care must be taken so that the solution is complete, and yet does not cause other problems in the system. Tests of the solution should be run prior to releasing it to the Project Officer and/or users. Some considerations related to problem solutions are:

1) Does the problem warrant an update of the system? If so, can this be held until the next scheduled release, or should it be released as soon as possible? The size of the correction, the severity of the problem, and the estimated date of the next update would be used in any determination made here.
2) Is there a temporary solution the user can apply prior to a general system update? How can this solution be transmitted (i.e., telephone conversion followed by written verification, update cards or tape)?
3) Was the problem related to faulty data of a type not tested for in the subsystem? If so, should additional checks be put into the system? Should the test data base be expanded?

4) Can a problem which could not be reproduced in the baseline be corrected by running the file in question through the baseline system? Such a problem might be an out-of-sequence master file, or a sort program problem.

5) Can the problem be corrected by using an in-line COBOL retrieval to change or remove data from the users file?

The actual method for correcting the problem should be discussed with the Project Officer. Then, the user is informed of the most efficient solution and the problem report is updated. Should an update to the system be necessary to correct a problem, it would be handled through the general update procedures (see Section 4.2).

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APPENDIX A

This appendix provides the reader with the hardware/software configuration status of each user who returned a completed questionnaire (See Figure 5.1).

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Pollution Control Division

Address: c/o State Board of Health, 1330 West Michigan St.
Indianapolis, Indiana 46206

HARDWARE

Location: Control Data Processing
Downtown Indianapolis, Indiana

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	165 MOD 3		
Core size (specify words or bytes	5 Megabytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VS2		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9 track 1600 bpi		
Disk Drive (specify 2314, 3330, etc.)	3330-1		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Standard IBM utilities are used.

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SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ________________

Task Order Expiration (date) ________________

Operational since (date) ________________

Installation in progress? Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No

By whom? Walden Research Division of Abcor, Inc.
Wilmington, MA 01887

Task Order expiration (date) Jan. 28, 1976

Operational since (date) June,1976

Installation in progress Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Harry Williams, Director
Air Pollution Control Division

Agency: Air Pollution Control Division

Address: c/o State Board of Heatlh
1330 West Michigan Street

City: Indianapolis State: Indiana Zip: 46206

Phone Number(s): (317)633-4814

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Not applicable.

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Keith Bougues

Address: Division of Air Pollution Control Division
State Board of Health, 1330 West Michigan Street

City: Indianapolis State: Indiana Zip: 46206

Phone Number(s): (317)633-4814

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ______________________

____

Address: ______________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ______________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ______________________

____

Address: ______________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ______________________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Ms. Roberta Joest

____

Address: Data Processing Division, State Board of Heatlh

1330 West Michigan Street

City: Indianapolis State: Indiana Zip: 46206

Phone Number(s): (317)633-5510

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Walden Research Division of Abcor Inc.
850 Main Street
Wilmington, MA 01887

Dr. Shashi B. Khanna
(617)657-4250

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Rhode Island Division of Air Pollution Control

Address: Davis Street, 204 Health Building
Providence, Rhode Island 02908

HARDWARE Computer time rented to Rhode Island by:

Location: Comsis Transportation and Planning
2025 Greentree Rd., Pittsburgh, PA 15220

	IBM	UNIVAC	Other (Specify)
Model Number			Amdahl
Series Number			470V/6
Core size (specify words or bytes			4 megabytes
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			OS-MVT
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			8 STC 9-trk,1600/6240 bp 3 STC 9-trk, 800/1600 b 1 STC 7-trk, 556-800 bpi
Disk Drive (specify 2314, 3330, etc.)			35 CDC 3330 8 CDC 2314

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

The operating system for the Amdahl 470V/6 is standard OS-MVT (see attachment). All updates will be standard IEBUPDTE format. Access to the Amdahl computer, which is owned by the Computer Usage Corp., is provided to the Rhode Island Division of Air Pollution Control by Comsis Transportation and Planning.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ____

By whom? Walden Research

Task Order Expiration (date) November 28, 1976

Operational since (date) April 23, 1976

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 13, Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ____ No X

By whom? ____

Task Order expiration (date) ____

Operational since (date) ____

Installation in progress Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Austin C. Daley
Chief
Agency: Rhode Island Division of Air Pollution Control
Address: Davis Street 204 Health Building

City: Providence State: Rhode Island Zip: 02908
Phone Number(s): (401)277-2808

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Tom Noel
Senior Engineer
Address: Rhode Island Division of Air Pollution Control
Davis Street 204 Health Building
City: Providence State: Rhode Island Zip: 02908
Phone Number(s): (401)277-2808

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Not applicable.

Address:

City: State: Zip:
Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: does not apply (computer facilities
provided by a private company - see below)

Address:

City: State: Zip:

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Mr. Dan Bryant

Address: Comsis Transportation and Planning
2025 Greentree Rd.

City: Pittsburgh State: PA Zip: 15220

Phone Number(s): (412)343-5665

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Not applicable.

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Walden Research

Dr. Richard D. Siegel
Walden Research Division of Abcor, Inc.
850 Main St.
Wilmington, MA 01887 Phone: (617)657-4250

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: ______________________________

Address: ______________________________

____

HARDWARE Mitre Corporation

Location: Burlington Rd., Bedford, Massachusetts 01730

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	158		
Core size (specify words or bytes			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9 trk 1600		
Disk Drive (specify 2314, 3330, etc.)	2314		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

We have blocked all data. We have inserted "Block Contains 0 Records" in all input and output file control sections. This allows us to place blocking parameters in DCB of JCL and have to recompile to optimize blocking from disk to disk or tape. This also allows file parameters to be picked up from file labels so any disk or tape can be used for input.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed?	Yes	X	No	
By whom?		GCA Tech		
Task Order Expiration	(date)			
Operational since	(date)	1975		
Installation in progress?	Yes		No	
By whom?				
Scheduled to be operational	(date)			
Installation planned?	Yes		No	
Installation schedule	(dates)			
Last update performed	#	none	Date	

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed?	Yes	X	No	
By whom?		GCA Tech		
Task Order expiration	(date)			
Operational since	(date)	1975		
Installation in progress	Yes		No	
By whom?				
Scheduled to be operational	(date)			
Installation planned?	Yes		No	
Installation schedule	(dates)			
Last update performed	#	7	Date	1/23/76

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: ______________________________

____

Agency: ______________________________

Address: ______________________________

____

City: ______________ State: ____________ Zip: _____

Phone Number(s): ______________________________

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ______________ State: ____________ Zip: _____

Phone Number(s): ______________________________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ______________ State: ____________ Zip: _____

Phone Number(s): ______________________________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: __________

Address: __________

City: _____ State: _____ Zip: _____

Phone Number(s): __________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Roger Stern

Address: GCA Technology
Burlington Rd.

City: Bedford State: Massachusetts Zip: 01730

Phone Number(s): 1-617-275-9000

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Roger Stern

Address: GCA Technology
Burlington Rd.

City: Bedford State: Massachusetts Zip: 01730

Phone Number(s): 1-617-275-9000

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Connecticut Department of Environmental Protection

Address: State Office Building

Hartford, Connecticut 06115

HARDWARE Connecticut Central Data Processing Service
Capitol Ave.
Location: Hartford, Connecticut 06115

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	168		
Core size (specify words or bytes	3 megabytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-trk 1600 bpi		
Disk Drive (specify 2314, 3330, etc.)	40 3330 drives Mod II		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

All updates will be standard IEBUPDTE format.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ______

By whom? Walden Research

Task Order Expiration (date) December 6, 1976

Operational since (date) May 21, 1976

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 13 Date ---

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No X

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. Henry Beal
Director of Air Compliance
Agency: Connecticut Department of Environmental Protection
Address: State Office Building
City: Hartford State: Connecticut Zip: 06115
Phone Number(s): (203)566-4030

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Mr. Vic Yanosy
Air Pollution Engineer
Address: Department of Environmental Protection
Air Compliance Section, State Office Building
City: Hartford State: Connecticut Zip: 06115
Phone Number(s): (203)566-7366

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Not applicable.
Address:
City: State: Zip:
Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Mr. Charles Mule
Manager, Data Processing
Address: Department of Environmental Protection
State Office Building
City: Hartford State: Connecticut Zip: 06115
Phone Number(s): (203)566-7366

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Ms. Susan Coole
Programmer
Address: Connecticut Department of Environmental Protection
State Office Building
City: Hartford State: Connecticut Zip: 06115
Phone Number(s): (203)566-7366

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Not applicable.
Address:
City: State: Zip:
Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Walden Research
Dr. Richard D. Siegel, Walden Research Division of Abcor, Inc.
850 Main Street
Wilmington, MA 01887 Phone: (617)657-4250

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: North Dakota State Department of Health

Address: 1200 Missouri Ave.
Bismarck, North Dakota 58505

HARDWARE

Location: Data Processing, North Dakota Hi-way Building
Bismarck, North Dakota 58505

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	1,000,000 bytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	7 or 9 track 800 or 1600 BPI		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

NONE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ______

By whom? Walden Research

Task Order Expiration (date) July 31, 1976

Operational since (date) 2-13-76

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 13. Date 2-12-76

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? Walden Research

Task Order expiration (date) July 31, 1976

Operational since (date) December 5, 1976

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 14 . Date 6-2-76

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. Dana K. Mount
Asst. Director
Agency: North Dakota State Dept. of Health
Address: 1200 Missouri Ave.
City: Bismarck State: North Dakota Zip: 58505
Phone Number(s): (701)224-2348

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Jay Crawford
Meteorologist
Address: North Dakota State Department of Health
1200 Missouri Ave.
City: Bismarck State: North Dakota Zip: 58505
Phone Number(s): (701)224-2348

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Darwin Schultz
Environmental Engineer
Address: North Dakota State Dept. of Health
1200 Missouri Ave.
City: Bismarck State: North Dakota Zip: 58505
Phone Number(s): (701)224-2348

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Jim Heck
Director

Address: Central Data Processing
North Dakota State Highway Building

City: Bismarck State: North Dakota Zip: 58505

Phone Number(s): (701)224-3190

AQDHS-II Contact (person responsible for performing updates):

Name and Title: George Bales
Programmer III

Address: Central Data Processing
North Dakota State Highway Building

City: Bismarck State: North Dakota Zip: 58505

Phone Number(s): (701)224-3190

EIS/P&R Contact (person responsible for performing updates):

Name and Title: George Bales
Programmer III

Address: Central Data Processing
North Dakota State Highway Building

City: Bismarck State: North Dakota Zip: 58505

Phone Number(s): (701)224-3190

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: North Dakota Department of Health, Division of Environmental Engineering

Address: State Capitol
Bismarck, North Dakota 58501

HARDWARE

Location: North Dakota Central Data Processing
State Highway Building, Bismarck, North Dakota 58501

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	1 megabyte		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track 1600 BPI		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

ADHS-II - All updates will be standard

EIS/P&R - All updates will be standard

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ______

By whom? Walden Research Div. of Abcor, Inc.

Task Order Expiration (date) June 11, 1976

Operational since (date) December 12, 1975

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 10 Date December 18, 1975

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? Walden Research Div. of Abcor, Inc.

Task Order expiration (date) June 11, 1976

Operational since (date) December 5, 1975

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 5 Date December 5, 1975

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Dana K. Mount, Supervisor
Air Pollution Control Program

Agency: North Dakota Department of Health, Division of Environmental Engineerir

Address: State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-2348

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Jay Crawford
Meteorologist

Address: North Dakota Department of Health, Division of Environmental Engineer
State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-2348

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Darwin W. Schultz
Sanitary Engineer

Address: North Dakota Department of Health, Division of Environmental Engineeri
State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-2348

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Fran Ely, Systems Manager

Address: Central Data Processing
Highway Building, State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

AQDHS-II Contact (person responsible for performing updates):

Name and Title: George Bales, Programmer

Address: Central Data Processing
Highway Building, State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

EIS/P&R Contact (person responsible for performing updates):

Name and Title: George Bales, Programmer

Address: Central Data Processing
Highway Building, State Capitol

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Walden Research Division of Abcor, Inc.
201 Vassar St., Cambridge, Massachusetts 02139 - Phone:(617)868-3940

AQDHS-II: Brian L. Kemerer
EIS/P&R: Dr. Shashi B. Khanna

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: North Dakota State Health Dept., Air Pollution Division

Address: State Capitol Building
Bismarck, North Dakota 58501

HARDWARE Location: Central Data Processing
Highway Building, Capitol Grounds
Bismarck, North Dakota 58501

	IBM	UNIVAC	Other (Specify)
Model Number	370/145		
Series Number			
Core size (specify words or bytes	1 mega		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	3420,9-track 800 and 1600 bpi		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

NONE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No

By whom? Brian Kemerer, Walden Research

Task Order Expiration (date)

Operational since (date) December 12, 1975

Installation in progress? Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 10 Date Dec. 12, 1975

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No

By whom? S. Khanna, Walden Research

Task Order expiration (date)

Operational since (date) Dec. 5, 1975

Installation in progress Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 5 Date Dec. 2, 1975

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Darwin Schultz
Environmental Engineer

Agency: North Dakota State Health Dept., Air Pollution Division

Address: State Capitol Building

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s):

AQDHS-II DATA BASE COORDINATOR:

Name and Title: George Bales
Programmer III

Address: Central Data Processing
Highway Building, Capitol Grounds

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

EIS/P&R DATA BASE COORDINATOR:

Name and Title: George Bales
Programmer III

Address: Central Data Processing
Highway Building, Capitol Grounds

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Jim Heck

Director

Address: Central Data Processing

Highway Building, Capitol Grounds

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

AQDHS-II Contact (person responsible for performing updates):

Name and Title: George Bales

Programmer III

Address: Central Data Processing

Highway Building, Capitol Grounds

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

EIS/P&R Contact (person responsible for performing updates):

Name and Title: George Bales

Programmer III

Address: Central Data Processing

Highway Building, Capitol Grounds

City: Bismarck State: North Dakota Zip: 58501

Phone Number(s): (701)224-3190

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Brian Kemerer and S. Khanna - Phone: (617)868-3740

Both of the above work for:

Walden Research, Division of Abcor, Inc.

201 Vassar St., Cambridge, Massachusetts 02139

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Quality Bureau, Montana Dept. of Health & Environmental Sciences

Address: Cogswell Building
Helena, Montana 59601

HARDWARE

Location: Montana Dept. of Highways
Capitol Complex, Helena, Montana 59601

	IBM	UNIVAC	Other (Specify)
Model Number	X		
Series Number	370-145		
Core size (specify words or bytes	768k		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track 1600 bpi		
Disk Drive (specify 2314, 3330, etc.)	2314 and 3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

NONE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ______ No X

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes ______ No X

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No X

Installation schedule (dates) ______

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? Pacific Environmental Services

Task Order expiration (date) Mid-1976

Operational since (date) approx. Feb. 1976

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mike Roach
Chief

Agency: Air Quality Bureau

Address: Montana Dept. of Health & Environmental Sciences, Cogswell Building

City: Heleua State: Montana Zip: 59601

Phone Number(s): (406)449-3454

AQDHS-II DATA BASE COORDINATOR:

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: James W. Gelhaus
Air Pollution Meterologist

Address: Montana Dept. of Health & Environmental Sciences
Cogswell Building

City: Helena State: Montana Zip: 59601

Phone Number(s): (404)449-3454

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: James W. Gelhaus
Air Pollution Meterologist

Address: Montana Dept. of Health & Environmental Sciences
Cogswell Building

City: Helena State: Montana Zip: 59601

Phone Number(s): (406)449-3454

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: James W. Gelhaus
Air Pollution Meterologist

Address: Montana Dept. of Health & Environmental Sciences
Cogswell Building

City: Helena State: Montana Zip: 59601

Phone Number(s): (406)449-3454

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Murray Levy
Pacific Environmental Services
Santa Monica, California
(213)393-9449

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: State Department of Health

Address: State Dept. of Health Building, 1740 West Adams St.
Phoenix, Arizona 85007

HARDWARE

Location: State of Arizona
212 E. Osborn, Phoenix, Arizona

	IBM	UNIVAC	Other (Specify)
Model Number			Honeywell
Series Number			6000
Core size (specify words or bytes			256k (6 bit words)
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			GCOS
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			9-track,1600 bpi
Disk Drive (specify 2314, 3330, etc.)			191

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

JLL/NEDSIN - converts NEDS tape to Honeywell

JLL/NEDSONT - converts Honeywell to IBM NEDS

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ____ No ____

By whom? ____

Task Order Expiration (date) ____

Operational since (date) ____

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ____

By whom? GCA Technology

Task Order expiration (date) ____

Operational since (date) August 1, 1976

Installation in progress Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 14 Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. Lloyd Rone
Acting Manager of Planning and Special Projects
Agency: State Dept. of Health Building
Address: 1740 West Adams St.
City: Phoenix State: Arizona Zip: 85007
Phone Number(s): (602)271-5306

AQDHS-II DATA BASE COORDINATOR:

Name and Title:
Address:
City: State: Zip:
Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Mr. Lloyd Rone
Acting Manager of Planning and Special Projects
Address: State Dept. of Health Building
1740 West Adams St.
City: Phoenix State: Arizona Zip: 85007
Phone Number(s): (602)271-5306

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Mr. Mike Mahattey

State Dept. of Health Building

Address: 1740 West Adams St.

City: Phoenix State: Arizona Zip: 85007

Phone Number(s): (602)271-4543

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Mr. Mike Mahattey

State Dept. of Health Building

Address: 1740 West Adams St.

City: Phoenix State: Arizona Zip: 85007

Phone Number(s): (602)271-4543

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Mrs. Joyce Wass

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Pima County Air Quality Control District

Address: 151 W. Congress
Tucson, Arizona 85701

HARDWARE

Location: Pima County Data Processing Dept.
131 West Congress, Tucson, Arizona 85701

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	512k real, 2 megas virtual		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	DOS-VS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track, 1600 bpi		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

1) Pima County utilizes the LIBRARIAN software product. This is a source library maintenance system.
2) DOS installation required the following modifications:
   a) SELECT statements in all COBOL programs
   b) LDLNGPRC and the retrieval skeleton were modified
   c) Statistical analysis print program was modified to read 260 byte unblocked record
   d) DOS FORTRAN requires unblocked input files; hence, a separate program was written to copy and unblock the answer and table files. This program replaced the two flagging programs supplied with the system.
   e) TOTREDIT was modified to change leading spaces to zero and to print only erroneous transactions. These changes were implemented by the addition of a new module to the end of the existing program; hence, all existing sequence numbers match NADB's.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No

By whom? Pacific Environmental Services

Task Order Expiration (date) 7/76

Operational since (date) 5/76

Installation in progress? Yes X No

By whom? Pacific Environmental Services

Scheduled to be operational (date) 5/76

Installation planned? Yes X No

Installation schedule (dates) Begin January 1976

Last update performed # 13 Date 2/76

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes No

By whom?

Task Order expiration (date)

Operational since (date)

Installation in progress Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # Date

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: C. Lee Fox

Director

Agency: Pima County Air Quality Control District

Address: 151 W. Congress

City: Tucson State: Arizona Zip: 85701

Phone Number(s): (602)792-8686 or 792-8803

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Karen J. Heidel

Project Engineer

Address: Pima County Air Quality Control District

151 West Congress

City: Tucson State: Arizona Zip: 85701

Phone Number(s): (602)792-8686

EIS/P&R DATA BASE COORDINATOR:

Name and Title: __________

Address: __________

City: __________ State: __________ Zip: ______

Phone Number(s): __________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Jack Shomauta

D.P. Manager

Address: Pima County Data Processing Dept.

131 West Congress

City: Tucson State: Arizona Zip: 85701

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Murray Levy

Pacific Environmental Services

1930 14th Street, Santa Monica CA 90404

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: California Air Resources Board

Address: Sacramento, California 95814

HARDWARE

Location: Stephen P. Teale Consolidated Data Center
2415 First Avenue, Sacramento, CA 95818

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	168		
Core size (specify words or bytes	2 mega bytes - 1st CPU 3 mega bytes - 2nd CPU		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	vs 2 release 1.7		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	7 trk 200, 556, and 800 BPI 9 trk 800, 1600, and 6250 BPI		
Disk Drive (specify 2314, 3330, etc.)	3330 and 3330 - 11		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

There are no special features which should affect how updates can be incorporated. The system has two IBM 370/168 machines with ample peripherals. The important software features are:

1. vs 2 release 1-7 under ASP scheduled to go to JES3 within a year
2. Standard IBM utilities
3. TSO
4. PANVALET is available

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ______ No X

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes X No ______

By whom? California Air Resources Board

Scheduled to be operational (date) October 1976

Installation planned? Yes ______ No ______

Installation schedule (dates) --

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? California Air Resources Board

Task Order expiration (date) not applicable

Operational since (date) January 1976

Installation in progress Yes --- No ---

By whom? ----

Scheduled to be operational (date) ----

Installation planned? Yes ______ No ---

Installation schedule (dates) ----

Last update performed # 10 Date April 1976

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: William H. Lewis, Jr.
Executive Officer
Agency: California Air Resources Board
Address:

City: Sacramento State: CA Zip: 95814
Phone Number(s):

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Robert Hollingsworth
Air Sanitation Engineering Associate
Address: P.O. Box 2815

City: Sacramento State: CA Zip: 95812
Phone Number(s): (916)322-6045

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Russ Tate
Assoc. Air Pollution Engineer
Address: P.O. Box 2815

City: Sacramento State: CA Zip: 95812
Phone Number(s): (916)322-6018

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Duane E. Seibel
Manager, Data Processing

Address: P.O. Box 2815

City: Sacramento State: CA Zip: 95812

Phone Number(s): (916)322-6018

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Ed Fitzgerald
Assistant Air Pollution Engineer

Address: P.O. Box 2815

City: Sacramento State: CA Zip: 95812

Phone Number(s): (916)322-6018

EIS/P&R Contact (person responsible for performing updates):

Name and Title: John Graham
Programmer/Analyst

Address: P.O. Box 2815

City: Sacramento State: CA Zip: 95812

Phone Number(s): (916)322-6018

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

NONE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Ventura County Air Pollution Control District

Address: 740 E. Main St.
Ventura, CA 93001

HARDWARE

Location: Santa Barbara County Data Services
105 East Anapamu St., Santa Barbara, CA 93103

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	512k		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9 track 800 bpi		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

DYL260 - Dylakor, Inc.

Librarian - Applied Data Research

IV-70 - Four Phase, Inc. - Data Entry

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ________________

Task Order Expiration (date) ________________

Operational since (date) ________________

Installation in progress? Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No ________

By whom? ________________

Task Order expiration (date) ________________

Operational since (date) ________________

Installation in progress Yes X No ________

By whom? Santa Barbara County, EDP

Scheduled to be operational (date) 9-1-76

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Jan Bush
APCD Manager

Agency: Ventura County Air Pollution Control District

Address: 740 E. Main St.

City: Ventura State: CA Zip: 93001

Phone Number(s): (805)648-6131, Ext. 2667

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ______

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

EIS/P&R DATA BASE COORDINATOR:

Name and Title: David Barnes - Engineer
(or) Douglas Tubbs - Data Systems

Address: 740 E. Main St.

City: Ventura State: CA Zip: 93001

Phone Number(s): (805)648-6131, Exts. 2664 or 2668

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Darrell Tate -
EDP Manager

Address: 105 East Anapamu St.

City: Santa Barbara State: CA Zip: 93103

Phone Number(s): (805)966-1611, Exts. 223, 331, or 423

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: David Barnes - Engineer
(or) Douglas Tubbs - Data Systems

Address: 740 E. Main St.

City: Ventura State: CA Zip: 93001

Phone Number(s): (805)648-6131, Exts. 2664 or 2668

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Department of Human Resources, Environmental Protection Section

Address: Air Quality Control, 1209 Johnson Street
Carson City, Nevada 89710

HARDWARE

Location: Computer Sciences Corp., Infonet Division
650 Sepulveda, El Segundo, CA 90245

	IBM	UNIVAC	Other (Specify)
Model Number			Infonet
Series Number			UNIVAC - 1108 Mainframe
Core size (specify words or bytes			256K wds.
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			CSTS
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			9-Track 800 BPI
Disk Drive (specify 2314, 3330, etc.)			*

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

*disk drives currently in use resemble 3330's in characteristics and operation

State of Nevada has a DASI silent 700 with dual cassetes as mode of data entry. Infonets editor commands closely resemble UNIVAC's for purpose of making updates to the system.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ________________

Task Order Expiration (date) ________________

Operational since (date) ________________

Installation in progress? Yes X No ________

By whom? Computer Sciences Corp.

Scheduled to be operational (date) Feb. 27, 1976

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No ________

By whom? ________________

Task Order expiration (date) ________________

Operational since (date) ________________

Installation in progress Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Richard Serdoz
Air Quality Officer

Agency: Dept. of Human Resources

Address: Environmental Protection Section, Air Quality Control
1209 Johnson Street

City: Carson City State: Nevada Zip: 89710

Phone Number(s): (800) 992-0900 Ext. 4670
(702) 885-4670

AQDHS-II DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ____________________

____

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ____________________

____

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: ____________________

____

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

____

____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Fresno County Air Pollution Control Dist.

Address: 1246 "L" Street
Fresno, CA 93721

HARDWARE

Location: Fresno County Computer Services Department, 1020 South Tenth Street, Fresno, CA 93702

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	½ meg real 6 meg virtual		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track 1600 BPI		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Standard Utilities

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ____ No X

By whom? ____

Task Order Expiration (date) ____

Operational since (date) ____

Installation in progress? Yes ____ No X

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No X

Installation schedule (dates) ____

Last update performed # ____ Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ____ No X

By whom? ____

Task Order expiration (date) ____

Operational since (date) ____

Installation in progress Yes X No ____

By whom? Fresno County Computer Svcs. Dept.

Scheduled to be operational (date) 2-28-77

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 17 Date 12-20-76

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Dr. Trevor Glenn
Air Pollution Control Engineer
Agency: Fresno County Air Pollution Control Dist.
Address: 1246 "L" Street
City: Fresno State: CA Zip: 93721
Phone Number(s): (209) 488-3239 (209) 488-3757

AQDHS-II DATA BASE COORDINATOR:

Name and Title: __________
Address: __________
City: ______ State: ______ Zip: ______
Phone Number(s): __________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Don Nelson
Data Processing Coordinator
Address: Fresno County Dept. of Health
P. O. Box 11867
City: Fresno State: CA Zip: 93775
Phone Number(s): (209) 488-2920

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Environmental Improvement Agency, Air Quality Division

Address: P. O. Box 2348
Sante Fe, New Mexico 87503

HARDWARE

Location: Division of Automated Data Processing, P.E.R.A. Bldg., Room 103, Sante Fe, New Mexico 87501

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	158 dvd 145		
Core size (specify words or bytes	1000K		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VS2 and OS-VM		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9/1600		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

In addition to IBM utilities, UNIV Computing Corp. TMS

Panvalet, HASP

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ______ No X

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes ______ No X

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes X No ______

Installation schedule (dates) by 6-30-77

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No X

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes ______ No X

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes X No ______

Installation schedule (dates) by 6-30-77

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Thomas E. Bacon

Director, Environmental Improvement Agency

Agency: Air Quality Division

Address: P. O. Box 2348

ATTN: Ken Hargis, Chief, Air Quality Division

City: Sante Fe State: New Mexico Zip: 87503

Phone Number(s): (505) 827-5271

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Bruce Nicholson, Program Manager

Air Quality Division

Address: Environmental Improvement Agency

P. O. Box 2348

City: Sante Fe State: New Mexico Zip: 87503

Phone Number(s): (505) 827-5271, Ext. 359

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Ralph Trigg, Cheif
Division of Automated Data Processing
Address: P.E.R.A. Bldg., Room 183

City: Sante Fe State: New Mexico Zip: 87501
Phone Number(s): (505) 827-3271

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Ivy Iwashita
Programmer
Address: Air Quality Division, Environmental Improvement Agency
P. O. Box 2348
City: Sante Fe State: New Mexico Zip: 87503
Phone Number(s): (505) 827-5271, Ext. 359

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:
Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

None

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Department of Environmental Conservation

Address: Pouch 0
Juneau, Alaska 99811

HARDWARE

Location: State of Alaska, Dept. of Administration, Division of Data Processing, Pouch C, Juneau, Alaska 99811

	IBM	UNIVAC	Other (Specify)
Model Number	148		
Series Number	370		
Core size (specify words or bytes	256K		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	DOS/VS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track 1600BPI		
Disk Drive (specify 2314, 3330, etc.)	33407omb		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Regular IBM utilities

360 system utilities

"DITTO" utilities

Power VS

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No X

By whom? ____________

Task Order Expiration (date) ____________

Operational since (date) ____________

Installation in progress? Yes X No ________

By whom? IBM Federal Services Division

Scheduled to be operational (date) Unknown

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No ________

By whom? ____________

Task Order expiration (date) ____________

Operational since (date) ____________

Installation in progress Yes X No ________

By whom? IBM Federal Services Division

Scheduled to be operational (date) Unknown

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Tom Hanna
Air Quality Supervisor

Agency: Department of Environmental Conservation

Address: Pouch O

City: Juneau State: Alaska Zip: 99811

Phone Number(s): (907) 465-2631

AQDHS-II DATA BASE COORDINATOR:

Name and Title: 'Dave Estes
Air Quality Engineer

Address: Dept. of Environmental Conservation
Pouch O

City: Juneau State: Alaska Zip: 99811

Phone Number(s): (907) 465-2692

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Michael Parisi
Director, Division of Data Processing

Address: Dept. of Administration, State of Alaska
Pouch C

City: Juneau State: Alaska Zip: 99811

Phone Number(s): (907) 467-2220

AQDHS-II Contact (person responsible for performing updates):

Name and Title:

Address: Dept. of Admin., Data Processing Div., Technical Services Section,
Pouch C

City: Juneau State: Alaska Zip: 99811

Phone Number(s): (907) 465-2222

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Fundacao Estadual de Engenharia do Meio Ambiente (FEEMA)

Address: Rua Fonseca Teles, 121 15° Andar
Rio de Janeiro, Rio de Janeiro, 20.000 Brazil

HARDWARE

Location: Computer is operated by the State of Rio de Janeiro and is locatec within Sec. of Finances, 11 Sta. Luzia, Rio de Janeiro, Brazil

	IBM	UNIVAC	Other (Specify)
Model Number	370/158		
Series Number			
Core size (specify words or bytes	1 Mega Bytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

We have standard IBM supplied update utilities

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No

By whom? John Thielke

Task Order Expiration (date)

Operational since (date) January 1, 1976

Installation in progress? Yes No X

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 10 Date January 7, 1976

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No

By whom? John Thielke

Task Order expiration (date)

Operational since (date) December 1975

Installation in progress Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 6,5 Date Dec. 20, 75
Jan. 14, 75

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Eng. Vitoria Valle Braile
Chief, Air Pollution Control Division

Agency: FEEMA

Address: Rua Fonseca Teles, 121 15° Andar

City: Rio de Janeiro State: Rio de Janeiro Zip: 20.000 Brazil

Phone Number(s): 254-4050 R 668

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Eng. Neise Ribeiro Vierra Carvalho
Chief - Laboratory

Address: FEEMA
Rua Fonseca Teles, 121 14° Andar

City: Rio de Janeiro State: Rio de Janeiro Zip: 20.000 Brazil

Phone Number(s): 254-4050 R 928

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Eng. Isaura Maria de Rezende Lopes
Engenhar

Address: FEEMA
Rua Fonseca Teles, 121 15° Andar

City: Rio de Janeiro State: Rio de Janeiro Zip: 20.000 Brazil

Phone Number(s): 254-4050 R

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Elpidio Gongalves Nina
Chief - Data Processing

Address: FEEMA
Rua Fonseca Teles, 121

City: Rio de Janeiro State: Rio de Janeiro Zip: 20.000 Brazil

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Eng. Vitoria Valle Braille
Chief - Air Pollution Control Division

Address: FEEMA
Rua Fonseca Teles, 121 Sala 1512

City: Rio de Janeiro State: Rio de Janeiro Zip: 20.000 Brazil

Phone Number(s): 254-4050 R 668

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Dr. John Thielke, Consultant
FEEMA, Rua Fonseca Teles, 121 Sala 1512, Rio de Janeiro, Rio de Janeir
20.000 Brazil (NOTE: I will be at this address until July 1, 1976)

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Dept. of Environmental Conservation, Haifa Municipality

Address: 24 Jerusalem Street
Haifa, Israel

HARDWARE

Location: Technion, Israel Institute of Technology

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number			
Core size (specify words or bytes			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track 1600 BPI		
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

These details will be specified at a later date.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed?	Yes		No	X
By whom?				
Task Order Expiration	(date)			
Operational since	(date)			
Installation in progress?	Yes	X	No	
By whom?	Dr. A. Birenzvige			
Scheduled to be operational	(date)	April 1978		
Installation planned?	Yes		No	
Installation schedule	(dates)			
Last update performed	#		Date	

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed?	Yes		No	X
By whom?				
Task Order expiration	(date)			
Operational since	(date)			
Installation in progress	Yes	X	No	
By whom?	Dr. A. Birenzvige			
Scheduled to be operational	(date)	April 1978		
Installation planned?	Yes		No	
Installation schedule	(dates)			
Last update performed	#		Date	

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Dr. A. Birenzvige
Chief, Air Resources Management Program

Agency: Dept. of Environmental Conservation, Haifa Municipality

Address: 24 Jerusalem Street

City: Haifa State: Israel Zip: ______

Phone Number(s): ______

AQDHS-II DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Haifa Municipality

Address: 24 Jerusalem Street
Haifa, Israel

HARDWARE

Location:

	IBM	UNIVAC	Other (Specify)
Model Number	360		
Series Number			
Core size (specify words or bytes	64K		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	7TRK 556 7TRK 800 9TRK 1600 9TRK 6250		
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

At this time no special software items, except the CDHS system, are planned. Any suggestions on this subject will be appreciated.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No X

By whom? ____________________

Task Order Expiration (date) ____________

Operational since (date) ____________

Installation in progress? Yes ________ No X

By whom? ____________________

Scheduled to be operational (date) ____________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No X

By whom? ____________________

Task Order expiration (date) ____________

Operational since (date) ____________

Installation in progress Yes ________ No X

By whom? ____________________

Scheduled to be operational (date) ____________

Installation planned? Yes X No ________

Installation schedule (dates) ____________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Dr. A. Birenzvige

Chief, Air Resources Management Program

Agency: Haifa Municipality

Address: 24 Jerusalem Street

City: Haifa State: Israel Zip:

Phone Number(s): 664282/3

AQDHS-II DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Pollution Engineering Division

Address: U.S. Army Environmental Hygiene Agency, HSE-EA
Aberdeen Proving Ground, MD 21010

HARDWARE

Location: Management Information Systems Office
Aberdeen Proving Ground, Maryland 21005

	IBM	UNIVAC	Other (Specify)
Model Number	360		
Series Number	65		
Core size (specify words or bytes	IMEG		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-MVT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-1600		
Disk Drive (specify 2314, 3330, etc.)	2314		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

HASP

COBOL VER-IV

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ____________________

Task Order Expiration (date) ____________________

Operational since (date) ____________________

Installation in progress? Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ________

By whom? MISO, APG, MD 21005

Task Order expiration (date) ____________________

Operational since (date) ____________________

Installation in progress Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: ________

Agency: Air Pollution Engineering Division, U.S. Army Environmental Hygiene Agy.

Address: HSE-EA

City: Aberdeen Proving Ground State: MD Zip: 21010

Phone Number(s): (301) 671-2509/3996

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ________

Address: ________

City: ________ State: ________ Zip: ________

Phone Number(s): ________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Roy V. Carter & James Irwin

Project Engineer, Statistician

Address: HSE-EA-A

City: Aberdeen Proving Ground State: MD Zip: 21010

Phone Number(s): (301) 671-2509/2371

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Michael L. Carothers
Chief, Data Processing Branch
Address: U.S. Army Environmental Hygiene Agency
ATTN: HSE-AD
City: Aberdeen Proving Gd. State: MD Zip: 21010
Phone Number(s): (301) 671-2475 or 671-2480

AQDHS-II Contact (person responsible for performing updates):

Name and Title:
Address:
City: State: Zip:
Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Ms. Fritzi M. Pylant
Systems Analyst
Address: U.S. Army Environmental Hygiene Agency
ATTN: HSE-AD
City: Aberdeen Proving Gd State: MD Zip: 21010
Phone Number(s): (301) 671-2475 or (301) 671-2480

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Caltrans

Address: 1120 "N" Street
Sacramento, CA 95817

HARDWARE

Location: Teale Data Center, 2415 First Ave., Sacramento, CA 95816

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	168		
Core size (specify words or bytes	3000K		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9TRX 6250BPI		
Disk Drive (specify 2314, 3330, etc.)	3330-1		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Virtual Storage

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes No X
By whom?
Task Order Expiration (date)
Operational since (date)
Installation in progress? Yes No X
By whom?
Scheduled to be operational (date)
Installation planned? Yes No X
Installation schedule (dates)
Last update performed # Date

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes No X
By whom?
Task Order expiration (date)
Operational since (date)
Installation in progress Yes No X
By whom?
Scheduled to be operational (date)
Installation planned? Yes No X
Installation schedule (dates)
Last update performed # Date

REMARKS

We store our data in the AQDHS data file. We do not use AQDHS-2 primarily because we consider AQDHS-1 less complex.

Mr. Walter Winter, during a May 1976 telephone conversation with Mr. Lloyd Hedgepeth, discussed our reasons for not changing to the AQDHS-2 data base file.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Adriana Gianturco

Director

Agency: Caltrans

Address: 1120 "N" Street

City: Sacramento State: CA Zip: 95817

Phone Number(s):

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Earl Shirley

Supervising M & R Engineer

Address: 5900 Folsom Blvd.

City: Sacramento State: CA Zip: 95819

Phone Number(s): (916)444-4833

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Ben Squires

Associate M & R Engineer

Address: 5900 Folsom Blvd.

City: Sacramento State: CA Zip: 95819

Phone Number(s): (916) 444-4824

AQDHS-II Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Management Services - Dept. of Public Health, City of Philadelphia

Address: 801 Arch St., 6th Floor
Philadelphia, PA 19106

HARDWARE

Location: Air Management Services Laboratory
1501 E. Lycoming St., Philadelphia, PA 19124

	IBM	UNIVAC	Other (Specify)
Model Number			Hewlett Packard
Series Number			9600 system(21005 computer
Core size (specify words or bytes			64K bytes
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			RTE-II
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			9-Track 800BPI
Disk Drive (specify 2314, 3330, etc.)			H-P 7905 (2315 type)

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

We do not use, or plan to use, AQDHS-II or EIS/P&R. All our software for SAROAD and EI preparation is our own.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No X

By whom? ________________

Task Order Expiration (date) ________________

Operational since (date) ________________

Installation in progress? Yes ________ No X

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No X

Installation schedule (dates) ________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ________ No X

By whom? ________________

Task Order expiration (date) ________________

Operational since (date) ________________

Installation in progress Yes ________ No X

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No X

Installation schedule (dates) ________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: William Reilly

Asst. Health Commissioner for Air Management Services

Agency: AMS - Dept. of Public Health, City of Philadelphia

Address: 801 Arch St.

6th Floor

City: Philadelphia State: PA Zip: 19106

Phone Number(s): (215) MU6-7840

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ____________

____

Address: ____________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ____________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ____________

____

Address: ____________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ____________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

For Information Regarding SAROAD Data - Contact:
[illegible]):

Name and Title: Roger Levy
Engineering Supervisor

Address: Air Management Laboratory
1501 E. Lycoming St.

City: Philadelphia State: PA Zip: 19124

Phone Number(s): (215) 288-5177

For Information Regarding EI/P&R Data - Contact:
[illegible]

Name and Title: William C. Miller
Staff Engineer

Address: 801 Arch St., 6th Floor
Air Management Services

City: Philadelphia State: PA Zip: 19106

Phone Number(s): (215) MU6-7883

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Kappa Systems, Inc.

Address: 1409 Potter Drive
Colorado Springs, Colorado 50902

HARDWARE

Location: Kappa Systems, Inc.

	IBM	UNIVAC	Other (Specify)
Model Number			Burroughs
Series Number			B-5500
Core size (specify words or bytes			64K words
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			7-Track 556BPI
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

The conversion of the IBM AQDHS-II system to a Burroughs B-5500 required numerous changes. The updates must, therefore, be examined carefully before inclusion into the B-5500 AQDHS system. Thus, all updates are non-standard.

This is a KSI in-house installation of AQDHS.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X B-5500 No ______

By whom? P. H. Karvellas (KSI)

Task Order Expiration (date) ______

Operational since (date) September 1975

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 9 Date Nov. 1975

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No ______

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes X No ______

By whom? P. H. Karvellas

Scheduled to be operational (date) Indefinite

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Not applicable (in-house installation)

Agency: ________

Address: ________

City: ________ State: ________ Zip: ____

Phone Number(s): ________

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Not Applicable

Address: ________

City: ________ State: ________ Zip: ____

Phone Number(s): ________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Not Applicable

Address: ________

City: ________ State: ________ Zip: ____

Phone Number(s): ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ______

______

Address: ______

______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Dr. P. H. Karvellas

Kappa Systems, Inc.

Address: 1409 Potter Drive

______

City: Colorado Springs State: Colorado Zip: 80902

Phone Number(s): (303) 597-1900

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as above)

______

Address: ______

______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

______

______

______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Texas Air Control Board

Address: 8520 Shoal Creek Blvd.
Austin, Texas 78758

HARDWARE

Location: Department of Health Resources
1100 W. 49th, Austin, Texas 78757

	IBM	UNIVAC	Other (Specify)
Model Number		1106	
Series Number			
Core size (specify words or bytes		256K words	
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)		Exec-8	
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)		9-Track 1600BPI	
Disk Drive (specify 2314, 3330, etc.)		8440	

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

DMS -1100

SYSTEM - 2000

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed?	Yes		No	X
By whom?				
Task Order Expiration	(date)			
Operational since	(date)			
Installation in progress?	Yes		No	X
By whom?				
Scheduled to be operational	(date)			
Installation planned?	Yes		No	X
Installation schedule	(dates)			
Last update performed	#		Date	

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed?	Yes		No	X
By whom?				
Task Order expiration	(date)			
Operational since	(date)			
Installation in progress	Yes		No	X
By whom?				
Scheduled to be operational	(date)			
* Installation planned?	Yes	X	No	
Installation schedule	(dates)	1/1/77		
Last update performed	#		Date	

*May be in modified form.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Charles R. Barden, PE
Executive Director

Agency: Texas Air Control Board

Address: 8520 Shoal Creek Blvd.

City: Austin State: Texas Zip: 78758

Phone Number(s): (512) 451-5711, Ext. 200

AQDHS-II DATA BASE COORDINATOR:

Name and Title: N/A

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Joe Pennington

Address: 8520 Shoal Creek

City: Austin State: Texas Zip: 78758

Phone Number(s): (512) 451-5711, Ext. 435

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Jim Myers

Manager Data Processing

Address: 8520 Shoal Creek

City: Austin State: Texas Zip: 78758

Phone Number(s): (512) 451-5711, Ext. 460

AQDHS-II Contact (person responsible for performing updates):

Name and Title: N/A

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: David Stephenson

Address: 8520 Shoal Creek Blvd.

City: Austin State: Texas Zip: 78758

Phone Number(s): (512) 451-5711, Ext. 474

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

None

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Iowa Department of Environmental Quality

Address: 3920 Delaware, P. O. Box 3326
Des Moines, IA 50316

HARDWARE

Location: Comptroller's Data Processing
Lucas State Office Building, Des Moines, IA 50309

	IBM	UNIVAC	Other (Specify)
Model Number	(2) 370		
Series Number	158		
Core size (specify words or bytes	2048K Each		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-MVT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	21 9-Track 1600BPI 1 9-Track 1600BPI or 800BPI		
Disk Drive (specify 2314, 3330, etc.)	44 3330 MOD-II		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

ASP Release 3.2.2

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ______

By whom? IBM

Task Order Expiration (date) 3/1/76 -

Operational since (date) Not operational

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # none performed Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No X

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes ______ No X

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No X

Installation schedule (dates) ______

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Edward J. Stanek
Director, Air Quality Management Division

Agency: Iowa Department of Environmental Quality

Address: 3920 Delaware
P. O. Box 3326

City: Des Moines State: IA Zip: 50316

Phone Number(s): (515) 265-8134

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Michael R. Durham
Environmental Specialist

Address: Iowa Department of Environmental Quality
Air Quality Management Division, 3920 Delaware

City: Des Moines State: IA Zip: 50316

Phone Number(s): (515) 265-8134

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ______

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Jane B. Swanson
Data Processing Section Chief

Address: Iowa Department of Environmental Quality
3920 Delaware Ave., P. O. Box 3326

City: Des Moines State: IA Zip: 50316

Phone Number(s): (515) 265-8134

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Jerry Tunistra
Data Processing Section

Address: Iowa Department of Environmental Quality
3920 Delaware Ave., P. O. Box 3326

City: Des Moines State: IA Zip: 50316

Phone Number(s): (515) 265-8134

EIS/P&R Contact (person responsible for performing updates):

Name and Title: ____

Address: ____

City: ____ State: ____ Zip: ____

Phone Number(s): ____

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

None

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Quality Program

Address: 117 Commerce Drive
Jefferson City, MO 65101

HARDWARE

Location: Employment Securities, Dunklin St., Jefferson City, MO 65101

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	158/45		
Core size (specify words or bytes	16 MEGABYTE		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSII		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-T(1600) 9-T(800)		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ____

By whom? Mike Gauer

Task Order Expiration (date) ____

Operational since (date) September 1975

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ____

By whom? Mike Gauer

Task Order expiration (date) ____

Operational since (date) September 1975

Installation in progress Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: James H. Long

Supervisor of Laboratory Services

Agency: Air Quality Program

Address: 117 Commerce Drive

City: Jefferson City State: MO Zip: 65101

Phone Number(s): (314) 751-3252

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Randall Raymond

Air Pollution Control Engr.

Address: 117 Commerce Drive

City: Jefferson City State: MO Zip: 65101

Phone Number(s): (314) 751-3252

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Randall Raymond

(Same as above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Randall Raymond

(Same as above)

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Randall Raymond

(Same as above)

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Randall Raymond

(Same as above)

Address: ____________________

____

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

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____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Pollution Control Agency

Address: State Laboratory Bldg., Hazen Drive

Concord, NH 03301

HARDWARE

Location:

	IBM	UNIVAC	Other (Specify)
Model Number			Honeywell
Series Number			6060
Core size (specify words or bytes			
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			
Disk Drive (specify 2314, 3330, etc.)			

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

G-COS-RELEASE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ____

By whom? ____

Task Order Expiration (date) ____

Operational since (date) ____

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ____ No ____

By whom? ____

Task Order expiration (date) ____

Operational since (date) ____

Installation in progress Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: ______

______

Agency: ______

Address: ______

______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Ms. Linda Spofford

Air Pollution Control Agency

Address: State Laboratory

Hazen Drive

City: Concord State: NH Zip: 03301

Phone Number(s): ______

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ______

______

Address: ______

______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Mr. Gerald Nelson, Director

Mr. Robert Strickland, Ass't. Director

Address: Dept. of C.D.P.

1 Pillsbury St.

City: Concord State: NH Zip: 03301

Phone Number(s): (603) 271-3761

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Mr. Roland Roy

Address: Dept. of Centralized Data Processing

1 Pillsbury St.

City: Concord State: NH Zip: 03301

Phone Number(s): (603) 271-3140

EIS/P&R Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Department of Natural Resources & Environmental Control

Address: Tatnall Building, Capitol Complex
Dover, Delaware 19901

HARDWARE

Location: Division of Central Data Processing
Highway Administration Building, Dover, Delaware 19901

	IBM	UNIVAC	Other (Specify)
Model Number	360		
Series Number	50		
Core size (specify words or bytes	512K		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OSMFT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track, 1600 bpi/800 bpi		
Disk Drive (specify 2314, 3330, etc.)	2314 (may be upgraded to 3330's by Dec. 1976)		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Standard IBM utilities

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ________

By whom? ________________

Task Order Expiration (date) ________________

Operational since (date) ________________

Installation in progress? Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ________

By whom? Walden Research Division of Abcor, Inc.
Wilmington, MA 01887

Task Order expiration (date) Jan. 6, 1977

Operational since (date) June, 1976

Installation in progress Yes ________ No ________

By whom? ________________

Scheduled to be operational (date) ________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ________________

Last update performed # ________ Date ________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Robert R. French, Manager
Air Resources Section, Division of Environmental Control
Agency: Department of Natural Resources & Environmental Control
Address: Tatnall Building, Capitol Complex

City: Dover State: Delaware Zip: 19901
Phone Number(s): (302) 678-4791

AQDHS-II DATA BASE COORDINATOR:

Name and Title: N/A

Address:

City: State: Zip:
Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Sam Eaton, Resources Control Specialist
Air Resources Section, Division of Environmental Control
Address: Department of Natural Resources & Environmental Control
Tatnall Building, Capitol Complex
City: Dover State: Delaware Zip: 19901
Phone Number(s): (302) 678-4791

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Mr. George Theis, Director

Address: Division of Central Data Processing
Highway Administration Building

City: Dover State: Delaware Zip: 19901

Phone Number(s): (302) 678-4678

AQDHS-II Contact (person responsible for performing updates):

Name and Title: N/A

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Mr. Clement T. Chang, Highway Engineer II

Address: Computer Support Section
Box 778

City: Dover State: Delaware Zip: 19901

Phone Number(s): (302) 678-4345

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Walden Research Division of Abcor, Inc. - Dr. Shasshi B. Khanna
850 Main Street (617) 657-4250
Wilmington, MA 01887

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: State Air Pollution Control Board

Address: Room 1106, 9th St. State Office Building
Richmond, VA 23219

HARDWARE

Location: Transportation and Public Safety Computer Resources Center
2220 W. Broad St., Richmond, VA 23220

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	158		
Core size (specify words or bytes	2048		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-MVT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			STC 9-Tr. 1600 BPI 9-Tr. 800/1600BP
Disk Drive (specify 2314, 3330, etc.)	3675 3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

OS/MVT - Release 21.8

HASP - Version 3.1

UCC One

Tape Management Software (TMS) System

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No
By whom? IBM
Task Order Expiration (date) Unknown
Operational since (date) April 28, 1976
Installation in progress? Yes X No
By whom? State ADP
Scheduled to be operational (date) April 28, 1976
Installation planned? Yes N/A No
Installation schedule (dates)
Last update performed # 13 Date March 1, 1976

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes No
By whom?
Task Order expiration (date)
Operational since (date)
Installation in progress Yes No
By whom?
Scheduled to be operational (date)
Installation planned? Yes No
Installation schedule (dates)
Last update performed # Date

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. William R. Meyer
Executive Director
Agency: State Air Pollution Control Board
Address: Room 1106
9th Street State Office Building
City: Richmond State: VA Zip: 23219
Phone Number(s): (804) 786-2378

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Mr. William W. Erskine
Director, Division of Engineering
Address: Room 1106
9th Street State Office Building
City: Richmond State: VA Zip: 23219
Phone Number(s): (804) 786-2530

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:
Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Mr. Herbert Alcox
Program Manager, System Support Services

Address: 9th Street State Office Building

City: Richmond State: VA Zip: 23219

Phone Number(s): (804) 786-6041

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Mr. Limon E. Fortner
APC Engineer

Address: 9th Street State Office Building
Room 1106

City: Richmond State: VA Zip: 23219

Phone Number(s): (804) 786-1795

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Mr. John Jacobsen (301) 840-6126
IBM Corporation
18100 Frederick Pike, Gaithersburg, MD 20760

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Fairfax County Health Department

Address: 4100 Chain Bridge Road
Fairfax, VA 22030

HARDWARE

Location: Fairfax County Cooperative Computer Center
4100 Chain Bridge Rd., Fairfax, VA 22030

	IBM	UNIVAC	Other (Specify)
Model Number	370-155		
Series Number	MOD-2		
Core size (specify words or bytes	1.5M		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VS2 Rel. 1.7		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Tr. 1600bpi		
Disk Drive (specify 2314, 3330, etc.)	3330 & 3330-1		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

No problems in making updates. The IBM utility program IEBUPDTE is used.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ____

By whom? Engineering Sciences, Inc.

Task Order Expiration (date) ____

Operational since (date) May 1975

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 13. Date 3-19-76

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ____

By whom? Engineering Sciences, Inc.

Task Order expiration (date) ____

Operational since (date) October 1975

Installation in progress Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 10 Date 3-19-76

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Daniel Helms, Director

Air Pollution Control Division

Agency: Fairfax County Health Department

Address: 4080 Chain Bridge Rd.

City: Fairfax State: VA Zip: 22030

Phone Number(s): (703) 691-2542

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Daniel Lanigan

Address: Office of Research & Statistics

County of Fairfax, 4100 Chain Bridge Rd.

City: Fairfax State: VA Zip: 22030

Phone Number(s): (703) 691-2355

EIS/P&R DATA BASE COORDINATOR:

Name and Title: (Same as Above)

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Richard P. Wahl, Jr., Director
Cooperative Computer Center

Address: County of Fairfax
4100 Chain Bridge Rd.

City: Fairfax State: VA Zip: 22030

Phone Number(s): ______

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Daniel Lanigan

Address: (Same as Above)

City: ______ State: ______ Zip: ______

Phone Number(s): ______

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Daniel Lanigan

Address: (Same as Above)

City: ______ State: ______ Zip: ______

Phone Number(s): ______

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

None

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Alabama Air Pollution Control Commission

Address: 645 S. MacDonough Street
Montgomery, Alabama 36130

HARDWARE

Location: UAH Computer Services, University of Alabama in Hunstville, P. O. Box 1247, Huntsville, Alabama 35807

	IBM	UNIVAC	Other (Specify)
Model Number		1100/10	
Series Number			
Core size (specify words or bytes		262K words	
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)		Exec 8	
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)		9-Track 1600BPI	
Disk Drive (specify 2314, 3330, etc.)		8440	

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

This installation is in the process of converting from a user-modified, UNIVAC 1108 ANSI compiled version of AQDHS-II to a recently updated EPA version of AQDHS-II which will be implemented on a UNIVAC 1100/10 with ASCII compiler. Upon completion of this implementation, a software package will be submitted, complete with implementation notes and comments for your review.

L. B. Perry

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ___X___ No _______

By whom? Computer Services Department University of Alabama, Huntsville

Task Order Expiration (date) _______

Operational since (date) _______

Installation in progress? Yes ___X___ No _______

By whom? Computer Services Department University of Alabama, Huntsville

Scheduled to be operational (date) _______

Installation planned? Yes _______ No _______

Installation schedule (dates) _______

Last update performed # _______ Date _______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes _______ No ___X___

By whom? _______

Task Order expiration (date) _______

Operational since (date) _______

Installation in progress Yes _______ No ___X___

By whom? _______

Scheduled to be operational (date) _______

Installation planned? Yes _______ No ___X___

Installation schedule (dates) _______

Last update performed # _______ Date _______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Richard McNider

Agency: Alabama Air Pollution Control Commission

Address: 645 S. MacDonough Street

City: Montgomery State: Alabama Zip: 36130

Phone Number(s): (205) 834-6570

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Donald Moss

Address: Alabama Air Pollution Control Commission
645 S. MacDonough Street

City: Montgomery State: Alabama Zip: 36130

Phone Number(s): (205) 834-6570

EIS/P&R DATA BASE COORDINATOR:

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Sylvia F. Heard
Manager, Computer Services

Address: University of Alabama in Huntsville
P. O. Box 1247

City: Huntsville State: Alabama Zip: 35807

Phone Number(s): (205) 895-6347

AQDHS-II Contact (person responsible for performing updates):

Name and Title: L. B. Perry
Programmer/Analyst

Address: Computer Services, University of Alabama in Huntsville
P. O. Box 1247

City: Huntsville State: Alabama Zip: 35807

Phone Number(s): (205) 895-6347

EIS/P&R Contact (person responsible for performing updates):

Name and Title: ____________________

____

Address: ____________________

____

City: ________ State: ________ Zip: ________

Phone Number(s): ____________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

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____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Dept. of Environmental Regulation

Address: 2562 Executive Center Circle East
Tallahassee, Florida 32301

HARDWARE

Location: Dept. of Environmental Regulation
2562 Executive Center Circle East, Tallahassee, Florida 32301

	IBM	UNIVAC	Other (Specify)
Model Number			RCP/UNIVAC 70/45-FE
Series Number			
Core size (specify words or bytes			196K
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			DOS
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			(6) 9-Track 800 BPI
Disk Drive (specify 2314, 3330, etc.)			(5) 70-590

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ______

By whom? IBM & Florida Personnel

Task Order Expiration (date) ______

Operational since (date) Approximately June 1975

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No ______

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Dr. J. P. Subramani, Chief, Bureau of Air Quality Mgmt.
Director Jay Landers, Secretary

Agency: Department of Environmental Regulation

Address: 2562 Executive Center Circle East

City: Tallahassee State: Florida Zip: 32301

Phone Number(s): Subramani - (904) 488-1345; Landers - (904) 488-4807

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Bob Iacampo
Systems Program Coordinator

Address: Department of Environmental Regulation
2562 Executive Center Circle East

City: Tallahassee State: Florida Zip: 32303

Phone Number(s): (904) 488-8626

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ____________________

Address: ____________________

City: __________ State: __________ Zip: ______

Phone Number(s): ____________________

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Terry Lee, Director
Mayo Data Center

Address:

City: Tallahassee State: Florida Zip: 32301

Phone Number(s): (904) 488-6761

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Frank Chase - Senior Analyst

Address: Ambassador Building
2003 Appalatchie Parkway

City: Tallahassee State: Florida Zip: 32301

Phone Number(s): (904) 488-8603

EIS/P&R Contact (person responsible for performing updates):

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Minnesota Pollution Control Agency

Address: 1935 West County Road B-Z
Roseville, MN 55113

HARDWARE

Location: University of Minnesota Health - Computer Sciences
Box 511, Mayo Memorial Building
Minneapolis, MN 55455

	IBM	UNIVAC	Other (Specify)
Model Number			Control Data
Series Number			3300
Core size (specify words or bytes			128K words
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			MASTER
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			4x7 Tracks, 556 & 800 2x9 Tranks, 800 & 160
Disk Drive (specify 2314, 3330, etc.)			12x#841

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

1. Do not have IBM utility IEBGENER
2. OZ9 keypunch codes are illegal
3. NADB tape blocking is done by support programs, rather than EIS/P&R programs
4. All programs have been downgraded to USASI COBOL (MASTER) Version 2 from original IBM COBOL 4
5. File opening and closing functions carried out by COBOL code appended to each program, rather than dealing through control cards (JCL)

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ______ No X

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? Health Computer Sciences University of Minnesota

Task Order expiration (date) April 1, 1976

Operational since (date) October 1975

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 10 Date March 1976

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. E. M. Wiik. P.E.
Director, Division of Air Quality
Agency: Minnesota Pollution Control Agency
Address: 1935 West County Road B-Z

City: Roseville State: MN Zip: 55113
Phone Number(s): (612) 296-7373

AQDHS-II DATA BASE COORDINATOR:

Name and Title: __________

Address: __________

City: __________ State: __________ Zip: ______
Phone Number(s): __________

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Mr. Gary C. Magil, Research Scientist
Division of Air Quality
Address: Minnesota Pollution Control Agency

City: Roseville State: MN Zip: 55113
Phone Number(s): (612) 296-7268

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ______________________________

____

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: (Same as EIS/P&R Data Base Coordinator)

____

Address: ______________________________

____

City: ____________ State: ____________ Zip: ______

Phone Number(s): ______________________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

____

____

____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Colorado Air Pollution Control Division

Address: 4410 E. 11th Ave.
Denver, Colorado 80222

HARDWARE

Location: Colorado Division of Automated Data Processing
2002 S. Colorado Blvd., Denver, Colorado 80220

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145		
Core size (specify words or bytes	1M Byte		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-VSI		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-Track 800/1600	(Tapes are IBM 3460's & STC's)	
Disk Drive (specify 2314, 3330, etc.)	(3330, 3314, 3340 - These drives are CDC DBL density equivalent to IBM's)		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Operating system - VSI

I/O Spooling Executive - RES (We use a remote entry terminal)

Tape - Tape Management System (All our master files are tape generation)

Source and Load Module Control - PANVALET Version 8. All source and load modules are maintained via PANVALET - COBOL copy statements do not work and have been eliminated by combining all copied modules into larger modules. (retrieval skeleton, ect.)

Procedure Control - Test/production dual library setup using IEBUPDTE for maintenance.

All modules (procedures, source, load) in our system reside in common libraries. We use no private libraries or disk packs. Because of this, all such modules are named using a rather specific naming convention which eliminates most security problems. This does not ordinarily cause us any difficulty.. However, when updates to the small modules used to build the skeleton programs are issued, some difficulties can arise. I would appreciate a full listing of all such modules in EIS (as of update 5) and AQII (as issued) with their original and any subsequent alias names they may have had.

Since our source is handled with PANVALET, it is impossible to maintain your IEBUPDTE sequence numbering. So far this has not been a problem; but if we experience difficulties, we will contact you.

If you desire any more information regarding our procedures or setup, please feel free to contact me.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ______ No ______

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes X No ______

By whom? TRC

Scheduled to be operational (date) Mid March, 1976

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ______

By whom? Pacific Environmental Systems

Task Order expiration (date) Mid July 1975

Operational since (date) Approx. June 1, 1975

Installation in progress Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 6 Date Nov. 30, 1975

NOTE: Update 6 blocking factor change handled in JCL rather than as program alteration.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. Robert Sier, Assistant Director
Acting Director Air Pollution Control Division

Agency: Colorado Air Pollution Control Division

Address: 4410 E. 11th Ave.

City: Denver State: Colorado Zip: 80220

Phone Number(s): (303)388-6111, Ext. 354

AQDHS-II DATA BASE COORDINATOR:

Name and Title: ______

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

EIS/P&R DATA BASE COORDINATOR:

Name and Title: ______

Address: ______

City: ______ State: ______ Zip: ______

Phone Number(s): ______

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: ______________________________

____

Address: ______________________________

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ______________________________

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ______________________________

____

Address: ______________________________

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ______________________________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: ______________________________

____

Address: ______________________________

____

City: ______________ State: ______________ Zip: ______

Phone Number(s): ______________________________

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Other than installation, there is no contract support on our systems.

____

____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Illinois EPA

Address: 2200 Churchill Rd.
Springfield, Illinois 62706

HARDWARE

Location: Management Information Division, Dept. of Finance
State Office Building, Springfield, Illinois 62706

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	168		
Core size (specify words or bytes	16 M bytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	MVS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track 1600/6250		
Disk Drive (specify 2314, 3330, etc.)	3330-11		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

EASYTRIEVE IBM COBOL ANS-4
PANVALET IMS
UCC-1 TMS
PAN*DA
TSO

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No
By whom?
Task Order Expiration (date)
Operational since (date)
Installation in progress? Yes No
By whom?
Scheduled to be operational (date)
Installation planned? Yes No
Installation schedule (dates)
Last update performed # Date

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes No X
By whom?
Task Order expiration (date)
Operational since (date)
Installation in progress Yes No
By whom?
Scheduled to be operational (date)
Installation planned? Yes No
Installation schedule (dates)
Last update performed # Date

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Patrick Lynch
Manager, Division of APC
Agency: Illinois EPA
Address: 2200 Churchill Rd.

City: Springfield State: Illinois Zip: 62706
Phone Number(s): (217)782-7326

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Shawn Patrick
Computer Systems Software Specialist
Address: 2200 Churchill Rd.

City: Springfield State: Illinois Zip: 62706
Phone Number(s): (217)782-4291

EIS/P&R DATA BASE COORDINATOR:

Name and Title: none

Address:

City: State: Zip:
Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Vince Hansen

Manager of EPA

Address: 2200 Churchill Road

City: Springfield State: Illinois Zip: 62706

Phone Number(s): (217)782-4291

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Dave Kolaz

Data Analysis Supervisor

Address: 2200 Churchill Rd.

City: Springfield State: Illinois Zip: 62706

Phone Number(s): (217)782-5811

EIS/P&R Contact (person responsible for performing updates):

Name and Title: none

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

none

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: San Diego County APCD   Health Care Agency - County of San Diego

Address: 9150 Chesapeake Dr.,   1600 Pacific Highway
San Diego, CA 92123   San Diego, CA 92101

HARDWARE

Location: County of San Diego Administration Building
1600 Pacific Hwy., San Diego, CA 92101

	IBM	UNIVAC	Other (Specify)
Model Number	370		
Series Number	145,158		
Core size (specify words or bytes	1536k,768k		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS-MVT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track 800-6250 bpi		
Disk Drive (specify 2314, 3330, etc.)	3333		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

PANVALET - Program Library and Management System (installed)

TMS - Tape Management System (installed)

Reports exceeding 10,000 print lines are spooled to a print tape.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II): n/a

Installed? Yes ______ No ______

By whom? ______

Task Order Expiration (date) ______

Operational since (date) ______

Installation in progress? Yes ______ No ______

By whom? ______

Scheduled to be operational (date) ______

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # ______ Date ______

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ______ No X

By whom? ______

Task Order expiration (date) ______

Operational since (date) ______

Installation in progress Yes X No ______

By whom? County of San Diego EDP Services & APCD

Scheduled to be operational (date) 9/30/76

Installation planned? Yes ______ No ______

Installation schedule (dates) ______

Last update performed # 14 Date 6/2/76

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: San Diego County APCD

9150 Chesapeake Dr., SAn Diego, CA 92123

Agency: Health Care Agency - County of San Diego

Address: 1600 Pacific Highway, San Diego, CA 92101

Frank Panarisi - Assistant CAO

City: San Diego State: CA Zip: 92101

Phone Number(s): (714)236-2881

AQDHS-II DATA BASE COORDINATOR:

Name and Title: n/a

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: John Morris

Systems Analyst

Address: San Diego County APCD

9150 Chesapeake Dr.

City: San Diego State: California Zip: 92123

Phone Number(s): (714)565-3901

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Al Nichols

Director

Address: San Diego County EDP Services

1600 Pacific Highway

City: San Diego State: California Zip: 92101

Phone Number(s): (714)236-2018

AQDHS-II Contact (person responsible for performing updates): n/a

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R Contact (person responsible for performing updates):

Name and Title: John Morris

Systems Analyst

Address: San Diego County APCD

9150 Chesapeake Dr.

City: San Diego State: California Zip: 92123

Phone Number(s): (714)565-3901

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

System installation and support furnished by the San Diego County

Department of EDP Services (no contract).

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Massachusetts Department of Environmental Quality Engineering

Address: 600 Washington St., Room 320
Boston, Massachusetts 02111

HARDWARE

Location: Massachusetts State College Computer Network
150 Causeway St., Boston, Mass. 02114

	IBM	UNIVAC	Other (Specify)
Model Number			CDC
Series Number	Cyber 72	Model 16	
Core size (specify words or bytes			98k 60 bit words
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)			NOS
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)			4-9 track 800/1600 b 1-7 track
Disk Drive (specify 2314, 3330, etc.)			8 CDC 844-21 110 million chars.

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ________ No ____X____

By whom? ____________________

Task Order Expiration (date) ____________________

Operational since (date) ____________________

Installation in progress? Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R): *

Installed? Yes ____X____ No ________

By whom? ________IBM________

Task Order expiration (date) ____________________

Operational since (date) ____Summer 1975____

Installation in progress Yes ________ No ________

By whom? ____________________

Scheduled to be operational (date) ____________________

Installation planned? Yes ________ No ________

Installation schedule (dates) ____________________

Last update performed # ________ Date ________

* EIS/P&R was installed on an IBM machine used by Massachusetts in 1975. In late 1975, an unforeseen change was made to a CDC machine of a different computer services vendor. Massachusetts intends to install EIS on the new machine. EPA support has been requested.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Gilbert T. Joly
Director, Division of Air Quality Control

Agency: Massachusetts Dept. of Environmental Quality Engineering

Address: 600 Washington St., Room 320

City: Boston State: Massachusetts Zip: 02111

Phone Number(s): (617)727-2658

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Robert Boiselle
Senior Air Pollution Control Engineer

Address: Massachusetts Dept. of Environmental Quality Engineering
600 Washington St., Room 320

City: Boston State: Massachusetts Zip: 02111

Phone Number(s): (617)727-2658

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Thomas Parks
Senior Air Pollution Control Engineer

Address: 600 Washington St., Room 320

City: Boston State: Massachusetts Zip: 02111

Phone Number(s): (617)727-2658

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Kenneth A. Hagg
Chief, Data Management Section
Address: Massachusetts Dept. Environmental Quality Engineering
600 Washington St., Room 320
City: Boston State: Massachusetts Zip: 02111
Phone Number(s): (617)727-2658

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Sheldon Sobel
Principal Programmer
Address: Massachusetts Dept. of Environmental Quality Engineer
600 Washington St., Room 320
City: Boston State: Massachusetts Zip: 02111
Phone Number(s): (617)727-2658

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Sheldon Sobel
Principal Programmer
Address: Massachusetts Dept. of Environmental Quality Engineering
600 Washington St., Room 320
City: Boston State: Massachusetts Zip: 02111
Phone Number(s): (617)727-2658

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Air Protection Branch, EPD, Dept. of Natural Resources

Address: 270 Washington Street, Room 816
Atlanta, Georgia 30334

HARDWARE

Location: Department of Administrative Services
270 Washington St. SW, Atlanta, Georgia 30334

	IBM	UNIVAC	Other (Specify)
Model Number		1110	
Series Number		1 x 1	
Core size (specify words or bytes		32k primary (word) 262k extended	
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)		EXEC-8	
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	8 U16 tape drive	(2) dual density (1) 7 track (5) 9 track 1600 bpi	
Disk Drive (specify 2314, 3330, etc.)		6 disks-440 spindles disk	

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

1) The Univac external sort did not function properly, so four Fortran Sort programs were written for the AQDHS system. 2) If a temporary transaction file is being passed from a printer in one program to card-reader in another, an extra transaction of a blank record will show up in the listing of transactions as the first record. It does affect program operation since the record is rejected. (See attached sheet for continuation.)

Attachment 1

UNIVAC ANS ASCII Differences

The following differences in ANS COBOL area encountered when installing on the UNIVAC 1110.

1. ASSIGN TO statements were changed in all cases using:

   ASSIGN TO MASS-STORAGE external-name.
   (tape or disk)

   ASSIGN TO CARD-READER.

   ASSIGN TO PRINTER.

   a) External names must be also given on CARD-READER and PRINTER if there is more than one card-reader or printer in the program.

2. Reserved words: SET-ID
   ACTIVE

3. In special names, top of page is PAGE.

4. 12 character name truncation unless there is an external name on ASSIGN. (This is not a problem if they are still unique.)

5. The term OPTIONAL should be added to any SELECT for a file that may at some time be dummy.

6. In sort programs, do not use a MOVE 30K statement.

7. Report Writer differs for its top of page requirements.

8. COBOL and Fortran programs can only read COBOL or Fortran files unless they are from CARD-READER.

9. REDEFINES must be same length or the object length is used - sometimes this is a problem and had to be coded around.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No

By whom? IBM contractor

Task Order Expiration (date)

Operational since (date) June 26, 1975

Installation in progress? Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 10 Date in progress

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No

By whom? IBM contractor

Task Order expiration (date)

Operational since (date) January 31, 1975

Installation in progress Yes No

By whom?

Scheduled to be operational (date)

Installation planned? Yes No

Installation schedule (dates)

Last update performed # 5 Date 12/12/75

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: R. H. Collom, Jr.
Chief

Agency: Air Protection Branch, EPD, Dept. of Natural Resources

Address: 270 Washington St., Room 816

City: Atlanta State: Georgia Zip: 30334

Phone Number(s): (404)656-6900 or (404)656-4867

AQDHS-II DATA BASE COORDINATOR:

Name and Title: James D. Mullins
Unit Coordinator, Meteorological & Statistical Unit

Address: Air Protection Branch
270 Washington Street, Room 816

City: Atlanta State: Georgia Zip: 30334

Phone Number(s): (404)656-6900

EIS/P&R DATA BASE COORDINATOR:

Name and Title: James D. Mullins
Unit Coordinator

Address: 270 Washington Street, Room 816

City: Atlanta State: Georgia Zip: 30334

Phone Number(s): (404)656-4967

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Data Coordination Section
EPD, Department of Natural Resources
Address: 270 Washington Street, Room 816

City: Atlanta State: Georgia Zip: 30334
Phone Number(s):

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Dale Kemmerick
Environmental Specialist II
Address: Environmental Protection Division
270 Washington St., S.W.
City: Atlanta State: Georgia Zip: 30334
Phone Number(s): (404)656-6900

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Dale Kemmerick
Environmental Specialist II
Address: Environmental Protection Division
270 Washington St., S.W.
City: Atlanta State: Georgia Zip: 30334
Phone Number(s): (404)656-6900

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

EPA Contractors.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Mississippi Air & Water Pollution Control Commission

Address: P.O. Box 827
Jackson, Mississippi 39205

HARDWARE

Location: Air & Water Pollution Control Commission
P.O. Box 827, Jackson, Mississippi 39205

	IBM	UNIVAC	Other (Specify)
Model Number	370/155		
Series Number			
Core size (specify words or bytes	2 million bytes		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS/MVT		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	7 track & 9 track		
Disk Drive (specify 2314, 3330, etc.)	3330 and 3333		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

We are using all Standard IBM utilities.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes ____ No ____

By whom? We use AQDHS-I.

Task Order Expiration (date) ____

Operational since (date) ____

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes X No ____

By whom? IBM

Task Order expiration (date) ____

Operational since (date) 5/75

Installation in progress Yes ____ No X

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # ____ Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Mr. Glen Wood, Jr., Director

Agency: Mississippi Air & Water Pollution Control Commission

Address: P.O. Box 827

City: Jackson State: Mississippi Zip: 39205

Phone Number(s): (601)354-6783

AQDHS-II DATA BASE COORDINATOR:

Name and Title:

Address:

City: State: Zip:

Phone Number(s):

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Earl LeMasters
Data Processing Manager

Address: P.O. Box 827

City: Jackson State: Mississippi Zip: 39205

Phone Number(s): (601)354-7513

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Name and Title: Earl LeMasters
Data Processing Manager

Address: P.O. Box 827

City: Jackson State: Mississippi Zip: 39205

Phone Number(s): (601)354-7513

AQDHS-II Contact (person responsible for performing updates):

Name and Title: ________

Address: ________

City: ________ State: ________ Zip: ________

Phone Number(s): ________

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Earl LeMasters
Data Processing Manager

Address: P.O. Box 827

City: Jackson State: Mississippi Zip: 39205

Phone Number(s): (601)354-7513

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

NONE

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

Agency: Ohio EPA

Address: 361 E. Broad St.
Columbus, Ohio 43215

HARDWARE

Location: Ohio Dept. of Administrative Services, Division of Computer Servic
30 E. Broad St., Columbus, Ohio 43215

	IBM	UNIVAC	Other (Specify)
Model Number	158		
Series Number	370		
Core size (specify words or bytes	2 million bytes real storage 16 million bytes virtual storage		
Operating System (specify OS-MFT, OS-MVT, OS-VSI, EXEC-8, etc.)	OS/VS		
Tape Drive (specify 7-track 556 bpi, 9-track 1600 bpi, etc.)	9-track 1600 BPI		
Disk Drive (specify 2314, 3330, etc.)	3330		

SOFTWARE

Please list software items (installed, being installed, or planned) which are/will be peculiar to your installation and programs (e.g., tape management, spooling requirements, update utilities other than standard IBM utilities). We're specifically interested in any peculiarities of your computing systems which affect how an update is or can be incorporated.

Considerations: OEPA has not accomplished all software updates because we do not use all AQDHS-II programs. Furthermore, due to the problems which we encountered with the AQDHS-II package, we have written our own programs t circumvent some of these problems. Upon receipt of the IBM-modified package, we plan to evaluate IBM's results and our current processing procedures.

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

SUBSYSTEM STATUS

Air Quality Data Handling Subsystem II (AQDHS-II):

Installed? Yes X No ____

By whom? Eddie Chin, Data & Systems Div., Ohio EPA

Task Order Expiration (date) ____

Operational since (date) In use since November 1974

Installation in progress? Yes ____ No ____

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No ____

Installation schedule (dates) ____

Last update performed # 9 Date ____

Emissions Inventory Subsystem/Permits and Registration (EIS/P&R):

Installed? Yes ____ No X

By whom? ____

Task Order expiration (date) ____

Operational since (date) ____

Installation in progress Yes ____ No X

By whom? ____

Scheduled to be operational (date) ____

Installation planned? Yes ____ No X

Installation schedule (dates) ____

Last update performed # ____ Date ____

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

AIR POLLUTION CONTROL MANAGER:

Please furnish full title and address of the State and/or Local (county or municipal) agency responsible for all air pollution control activities of the agency, and the name, title, address, and phone number of the agency's director.

Name and Title: Jack A. Wunderle, Chief
Office of Air Pollution Control

Agency: Ohio EPA

Address: 361 E. Broad St.

City: Columbus State: Ohio Zip: 43215

Phone Number(s): (614)466-6116

AQDHS-II DATA BASE COORDINATOR:

Name and Title: Douglas Dean
Supervisor, Air Quality Group

Address: Office of Air Pollution Control
Ohio EPA, 361 E. Broad St.

City: Columbus State: Ohio Zip: 43215

Phone Number(s): (614)466-7390

EIS/P&R DATA BASE COORDINATOR:

Name and Title: Not applicable.

Address:

City: State: Zip:

Phone Number(s):

SYSTEM STATUS/HARDWARE/SOFTWARE QUESTIONNAIRE

DATA PROCESSING PERSONNEL:

Director:

Management Contact:

Name and Title: Albert Merkel, Chief

Systems Analysis & Software Development Section

Address: Ohio EPA, Division of Data & Systems

361 E. Broad St.

City: Columbus State: Ohio Zip: 43215

Phone Number(s): (614)466-5760

AQDHS-II Contact (person responsible for performing updates):

Name and Title: Eddie Chin, Programmer Analyst

Address: Ohio EPA, Division of Data & Systems

361 E. Broad St.

City: Columbus State: Ohio Zip: 43215

Phone Number(s): (614)466-5760

EIS/P&R Contact (person responsible for performing updates):

Name and Title: Not applicable.

Address:

City: State: Zip:

Phone Number(s):

Contract Support:

Please identify contractor and furnish name, address and phone number(s) of any contract personnel supporting your CDHS subsystems.

Contract is now pending with IBM, Gaithersburg. This contract is being arranged through Steve Goranson, USEPA, Region V.

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APPENDIX B

Both of the CDHS subsystems contain a series of test runs for use in testing the subsystem and in providing user training on use of the subsystem. At the present time, the test run series for AQDHS-II consists of 53 test jobs and the EIS/P&R test run series of 31 test jobs.

Both test run series have been designed to exercise all aspects of the systems, and each program in the system is tested. Each type of transaction and option is tested in the various programs. The various error messages are also tested (as an example, see TEST 37 of AQDHS-II which tests all error messages in the Transaction Edit program TXTREDIT). As new problems or modifications occur in the system, they are reflected by additions or changes in the test runs.

Both the AQDHS-II and the EIS/P&R test run series begin by building the initial files used for validation and edit. Next, the programs used to convert the NEDS or SAROAD transactions to CDHS format are run. These transactions are then edited and used to build the CDHS master file. Once the initial master file is built, the various retrievals and reports are run, as well as the programs to generate NEDS/SAROAD transactions. Then, additional file maintenance runs and further tests of the other programs are run.

The descriptions in Appendix B explain what each test run accomplishes. Each procedure is described, identifying the programs and files involved. The origin of each file is listed to help in running specific tests. The listings of the JCL to run the tests can be found in Appendix C.

The test run series is included in initial installation packages for new users and is also available upon request to other users.

A baseline series of test runs is maintained for each system and is used for troubleshooting and for acceptance testing of subsystem modifications.

When a user reports a problem with either of the CDHS subsystems, he sends information regarding the problem to NADB. When necessary, an attempt is made to duplicate the problem on the baseline system. The test run series is very useful for this, with additional data being added as needed for the specific problems involved. By using the standard test jobs and the baseline system, it is possible to determine whether the problem is with the system or with the user's installation, data, etc. Once a problem has been found to be in the baseline system, corrections are tested on the baseline system using the test run series prior to issuing them to the user or to issuing a general update.

When a general update has been completed and installed on the baseline system, the test run series is used for an acceptance test. This is conducted under the supervision of the Project Officer. New data or new runs should be added to test the modifications included in the update. The output from these acceptance test runs should be kept for use in future troubleshooting.

AQDHS-II TEST 1

Build the Initial Parameter Code Table

Test 1 executes the procedures AHQHUPD1, AHQNSENT, and AHQPMETH to build, and list the initial parameter code table. AHQHUPD1 accepts the parameter data and initiates the system sort program to sort the parameter data. The sorted data is then passed to the HXTABLE1 program, which builds the two files HTPRM1AA and HTPRM2AA. File HTPRM1AA contains the parameter codes, method codes, unit codes, and minimum detectable values; File HTPRM2AA contains the associated prose descriptions for these values.

HTPRM1AA is input to the procedure AHQNSENT, which consists of the program NXSENTNL. This procedure copies HTPRM1AA and appends a sentinel record so that the file can be used as input to the FORTRAN language statistical analysis program. This flagged file is called NTPRM1AA.

Finally, the procedure AHQPMETH invokes the program PXMETHOD and uses the files HTPRM1AA and HTPRM2AA to print a detailed parameter code table.

AQDHS-II TEST 2

Build the Initial Site Code Table

Test 2 executes the procedures AHQHUPD2 and AHQPSITE to build and test the initial valid site code table. AHQHUPD2 accepts the valid site data and uses the system sort program to sort the incoming data. The sorted data is then passed to the HXTABLE2 program which builds the initial site code file HTSITEAA.

The procedure AHQPSITE uses the program PXSITE to print a detailed listing site code file.

AQDHS-II TEST 3

Build the Initial Parameter Standards Table

Test 3 uses the procedures AHQHUPD3 and AHQPSTDS to build and list the initial parameter standards table. AHQHUPD3 inputs the parameter standards data and performs the system sort program on this data. The sorted data is then passed to the HXTABLE3 program which builds the parameter standards file HTSTNDAA.

The procedure AHQPSTDS uses the program PXPRMSTD to print a detailed parameter standards table from the file HTSTNDAA.

AQDHS-II TEST 4

Create an Old Format Master File

Test 4 uses the catalogued procedure AHQUBILD to build an old AQDHS format master file.

AHQUBILD accepts the input transactions and builds an old AQDHS format file using the program UXBLDSRD. The file OLDAQDHS is then sorted into proper sequence.

AQDHS-II TEST 5

Convert Old Format Master File to AQDHS-II Transactions

Test 5 converts the old format file OLDAQDHS of Test 4 into new format transactions and uses those transactions to build a master file. It also prints a detailed list of the master file. This test job uses the procedures AHQBCNVT and AHQELIST.

The procedure AHQBCNVT converts the old format file OLDAQDHS to new format transactions. BXCONVRT is the only program invoked by this procedure. A listing of the old format file and the new format file is printed.

The new format transactions created by AHQBCNVT are passed to AHQFUPDT. The first program executed in this procedure is TXTREDIT which edits the transactions for correctness and converts them to the internal format required by the file maintenance program. Any errors found during the edit are printed. There are three input files to TXTREDIT: the new format transactions created by AHQBCNVT; HTPRM1AA, the key portion of the parameter code table created in Test 1; and HTSITEAA, the valid site code file created by Test 2.

The internal format transactions, which are the output from TXTREDIT, are sorted into master file sequence by the system sort program and then passed to the file maintenance program FXFILMNT. FXFILMNT matches the transactions to the master file adding, changing, or deleting records as indicated. In this test, there is no old master file. Since all the transactions are add transactions, a new master file AQ102976 is created.

The last procedure AHQELIST produces a detailed list of the new master file AQ102976. It executes the program EXRPTLST, which uses the parameter code table (HTPRM1AA and HTPRM2AA, Test 1), the site code table (HTSITEAA, Test 2). and the parameter standards table (HTSTNDAA, Test 3) to produce a detailed, formatted listing of the master file.

AQDHS-II TEST 6

SAROAD Input to AQDHS-II Transactions

This test converts SAROAD input transactions to AQDHS-II transactions. It uses the procedure AHQCNVRT which consists of the program CXCONVRT. The output file of AQDHS-II transactions is called AQTRANS. The list option to print only valid transactions is used in this test.

AQDHS-II TEST 7

Master File AQ102976 Updated Using the Converted SAROAD Transactions (AQTRANS)

This test updates the master file AQ102976 created in Test 5 with the transactions converted in Test 6 (AQTRANS) and prints a detailed report. It uses the catalogued procedures AHQFUPDT and AHQELIST.

The procedure AHQFUPDT executes the program TXTREDIT. TXTREDIT edits the transactions in AQTRANS and converts them to the internal format required by the file maintenance program. The key portion of the parameter code table (HTPRM1AA) and the valid site code table (HTSITEAA) is also input to TXTREDIT. The FLAGW and LIST options are used.

The internal format transactions which are the output from TXTREDIT are sorted and passed to the file maintenance program FXFILMNT. The LIST and FLAGW options are used. The output from FXFILMNT is the updated master file AQ1029V3.

The last procedure AHQELIST produces a detailed list of the updated master file AQ1029V3. It executes the program EXRPTLST, which uses the parameter code table (HTPRM1AA and HTPRM2AA, Test 1), the new site code table (HTSITEAA, Test 2), and the parameter standards table (HTSTNDAA, Test 3) to produce a detailed, formatted listing of the master file. The MEAN and DISPLAY options are used.

AQDHS-II TEST 8

Master File AQ1029V3 is Updated by AQDHS-II Transactions

This test updates the master file AQ1029V3 from Test 7 using AQDHS-II transactions on punched cards. It uses the catalogued procedure AHQFUPDT.

The transactions are edited and converted to internal format by the program TXTREDIT. The LIST and FLAGW options are used. The internal format transactions are sorted and passed to the file maintenance program FXFILMNT. The output from FXFILMNT is the updated master file AQ1029V2. No detailed listing is made of the master file.

AQDHS-II TEST 9

Master File AQ1029V2 Updated by New Format Transactions

This test updates the master file from Test 8 with AQDHS-II format transactions. A detailed report using the mean and display options is produced from the updated master file AQ1029C6.

AQDHS-II TEST 10

Master File AQ1029C6 Updated Using Composite Data

This test updates the master file from Test 9 using AQDHS-II format, composite data transactions. The updated master file is AQ1029C2. No detailed listing is made.

AQDHS-II TEST 11

Edit Composite Data

This test uses the transaction edit program to edit composite data. It uses the catalogued procedure AHQTEDIT. AHQTEDIT performs the edit (TXTREDIT) and sort programs but, unlike AHQFUPDT, does not perform the file maintenance program (FXFILMNT). A file of internal format transactions, ----.TRANS, is created and can be used later as input to the file maintenance program.

AQDHS-II TEST 12

Update Master File AQ1029C2 Using the Edited Transactions From Test 11

This test performs file maintenance on the master file AQ1029C2 created by Test 10, updating it with the transactions edited by Test 11 (.TRANS). It uses the procedure AHQMFUPD which executes the program FXFILMNT. The output is the new master file AQ1019CC. No detailed list is produced.

AQDHS-II TEST 13

Submit Quarterly Report

This test uses the procedure AHQACNVT to submit the data on the master file AQ1019CC (from Test 12) to SAROAD and then repeats the procedure to verify that all data were submitted. AXCONVRT is the program executed by AHQACNVT.

The first execution of AHQACNVT converts file AQ1019CC to SAROAD input format and flags each reading as sent ('S'). Three output files are created: ADDFILE, the SAROAD add file; CHNGEFL, the SAROAD change file; and AQ102076, the new master file with all readings flagged sent ('S').

AQ102076 is then used as the input for the second execution of AHQACNVT. Since all the records are flagged as having been sent to SAROAD, there are no records written for the SAROAD add and change files. The only output is the master file FTMSTRAE.

AQDHS-II TEST 14

Retrieve TSP Data

This test retrieves all data on the master file AQ102076 which is for the parm code 11101 (TSP) and year ≥ 1972. It uses the catalogued procedure AHQRETVR which invokes the language processor LXLNGPRC. LXLNGPRC uses the retrieval specification statements to build the retrieval program This program is then compiled, link-edited, and executed. TSPG72 is the resultant output answer file from this test. The answer file is produced in master file format.

AQDHS-II TEST 15

Statistical Analyses of File TSPG72

This test performs statistical analyses of the data retrieved in Test 14 from master file AQ102076. It uses the catalogued procedures AHQMSENT, AHQDANAL, and AHQSLIST.

AHQMSENT uses the program MXSENTNL to append a sentinel record to the input file TSPG72. This sentinel record is required by the FORTRAN statistical analysis program. The resultant flagged file is then passed to AHQDANAL.

AHQDANAL invokes the FORTRAN program DXSTATIS which computes the following statistical information: minimum and maximum observations; arithmetic mean; standard deviation; geometric mean and standard deviation; percentage of readings present; and the 10th, 30th, 50th, 70th, 90th, 95th, 97th, 98th, and 99th percentile occurences.

The statistics file created in AHQDANAL (STAT15B) is passed to procedure AHQSLIST which invokes the program SXPRINTS to produce a formatted listing of this statistics file.

AQDHS-II TEST 16

Retrieval on AQ102076 Using Sliding Average Mode

This test reruns the retrieval in Test 14 in sliding average mode. It uses the catalogued procedures AHQRETVR, AHQIAVGS, and AHQELIST.

AHQRETVR produces the sliding answer file TSPG72SA and passes it to AHQIAVGS. AHQIAVGS uses the program IXSLDAVG to compute the sliding average values file (ITSLDA16) from TSP672SA.

The procedure AHQELIST invokes the detail list program which produces a formatted listing of ITSLDA16.

AQDHS-II TEST 17

Retrieve SO_2 Data

This test uses the catalogued procedure AHQRETVR to retrieve all data on the parm code 42401 (Sulfur Dioxide) taken later than 1971. SO2672 is the resultant answer file.

AQDHS-II TEST 18

Detailed List of TSPG72

This test uses the catalogued procedure AHQELIST to produce a formatted listing of the data retrieved in Test 14.

AQDHS-II TEST 19

Update HTPRM1AA and HTPRM2AA

This test executes the same procedures as Test 1. Whereas Test 1 created the initial parameter code table, Test 19 makes additions and changes to the existing table. Files HTPRM1AB and HTPRM2AB are the two output file segments of this updated table. File NTPRM1AB is file HTPRM1AB with an appended sentinel record.

AQDHS-II TEST 20

Update HTSITEAA

This test executes the same procedures as Test 2. Whereas Test 2 created the initial site code table, this test makes additions and changes to the existing table. HTSITEAB is the file containing the updated table.

AQDHS-II TEST 21

Update HTSTNDAA

This test executes the same procedures as Test 3. Whereas Test 3 created the initial parameter standards table, this test makes additions and changes to the existing table. HTSTNDAB is the file containing the updated table.

AQDHS-II TEST 22

Master File Update

This test uses the two procedures AHQTEDIT and AHQMFUPD to update the master file AQ102076 with AQDHS-II formatted transactions. AHQTEDIT consists of the transaction editor (TXTREDIT) and the system sort program. AHQMFUPD consists of the file maintenance program FXFILMNT. The updated parameter code table created by Test 19 and the updated site code table created by Test 20 are used by the edit program. AQ102576 is the updated master file created by this test.

AQDHS-II TEST 23

Convert SAROAD Transactions to AQDHS-II Format

This test uses the procedure AHQCNVRT to convert SAROAD input transactions to AQDHS-II format. CXCONVRT is the program executed by AHQCNVRT, and AQTRANS is the resultant file.

AQDHS-II TEST 24

Master File Update

This test uses the converted transactions from Test 23 to update the master file AQ102576. It performs the procedure AHQFUPDT which consists of the transaction editor (TXTREDIT), the system sort, and the file maintenance (FXFILMNT) programs. WRONG76 is the updated file created by this test.

AQDHS-II TEST 25

Retrieval on WRONG76

This test retrieves all data from 1976 and changes the status flags of the data to "ADD." The AHQRETVR procedure is used with the USER option. This option allows the retrieval statements to be entered as COBOL language statements. In this test, the COBOL retrieval statements not only select the 1976 data but also change the status flags to "ADD." AQ102876 is the resultant answer file.

AQDHS-II TEST 26

Submit Quarterly Report

This is the second test run involving the AQDHS-II to SAROAD conversion program (see Test 13). The master file created in Test 25, AQ102876, is used as input to the conversion program AXCONVRT. This program is invoked by the procedure AHQACNVT. The output files are ADDFILE, CHNGEFL, and the new master AQ102V2.

AQDHS-II TEST 27

Retrieve Data From Test 26 on Year 1976 and List with Dump Program

This retrieval run selects all data from the output master file from Test 26, AQ1027V2, that is from the year 1976. The catalogued procedure AHQRETVR invokes the language processor LXLNGPRC to produce a source program with the desired retrieval instructions. This program is then compiled, link-edited, and executed to produce the desired output file of 1976 data, AQ76DATA. This file is passed on to the catalogued procedure AHQDUMP. This is the only use made of AHQDUMP in the entire series of test runs. This procedure invokes the program AQSDUMP (a debugging tool used by RTI replaced by the standard program in the baseline test run series delivered to users). As its name implies, this program produces a concise listing of the master or answer file contents. Each non-repeating field of the master record is labeled, and each record is printed on a maximum of 6 lines, separately from the other records. AQSDUMP is perhaps most useful when one is primarily interested in the fields of individual records without regard for comparisons among the data of related records.

AQDHS-II TEST 28

Data Analysis of Test 17 File (SO_2 Data, 1972 to Present)

So that it can be input to the FORTRAN data analysis program, the file created in Test 17 (SO2G72) has a sentinel record appended to it by the program MXSENTNL. The output file name is STAT78. This is accomplished in the catalogued procedure AHQMSENT. The program DXSTATIS, which performs the actual analysis, is then called by the procedure AHQDANAL. Printing of the resulting SO_2 analysis data file (STAT28B) is carried out by SXPRINTS.

AQDHS-II TEST 29

Sliding Average Retrieval of Test 13 Output File

This run deals with the same data that the preceding test did (SO_2 data, from 1972 on). However, this time it goes back to the input file of Test 17, AQ102076, (output of Test 13) and retrieves the data in sliding average mode. The only difference between the retrieval language statements of Test 17 and those of this test run is the appearance of the mode keyword 'SLIDING' on the '$$SELECT' card.

After the catalogued procedure AHQRETVR retrieves the desired answer file in sliding average mode, SO2672SA, the next step is to run the file through IXSLDAVG, the program which computes the sliding average values. This is accomplished by invoking the procedure AHQIAVGS. The output file, ITSLDA29, is printed by invoking the procedure AHQELIST which uses the detail list program EXRPTLST. Notice that EXRPTLST can handle answer files of either type, standard or sliding average, since the file records of both are in the same format.

User-supplied control cards enter in to both the sliding average program and the detail list program. For this run, the sliding average interval chosen is 3 readings, and the listing option card places no restriction on the listing of actual data values (N>9997).

AQDHS-II TEST 30

List the SO_2 Data Retrieved in Test 17

Like the preceding two tests, this run prints information from the Test 17 data. What distinguishes this test from the other two is the fact that Tests 28 and 29 list SO_2 data that is first massaged by the statistical analysis and sliding average programs, whereas this test prints the raw SO_2 data as it was retrieved in TEST 17. Therefore, only the catalogued procedure AHQELIST is used in this run; it calls the detail list program EXRPTLST to list the standard answer file. Note that this is the same program that listed the sliding average answer file in Test 29.

AQDHS-II TEST 31

Data Analysis of File From Test 27 (1976 Data)

This test run and the following two do for the 1976 data retrieved in Test 27 (AQ76DATA) what Tests 28 through 30 did for the SO_2 data retrieved in Test 17. They manipulate the retrieved data to produce the three types of information files that can be provided by the AQDHS-II subsystem: (1) the standard answer file, (2) the sliding average file, and (3) the statistics file.

This test corresponds to Test 28 in that it also performs statistical analysis on the raw data retrieved in Test 27. First, the catalogued procedure AHQMSENT invokes the program MXSENTNL to append a sentinel record to the Test 27 answer file. This preliminary processing is for the benefit of the FORTRAN program DXSTATIS which is called next by the procedure AHQDANAL to perform the actual analysis. The third procedure in the stream is AHQSLIST which lists the statistics file STAT31B by using the program SXPRINTS.

AQDHS-II TEST 32

Sliding Average of 1976 Data Retrieved from Test 26 Output File

This is precisely the same job stream as Test 29 except for differences in the retrieval language and in the input files used. Whereas the retrieval language in Test 29 called for SO_2 data, the language in this run requests 1976 data. Also, Test 29 used the same input file that Test 17 used while this test shares Test 27's input file (AQ1027V2, the output file from Test 26).

The job stream calls for the execution of the following catalogued procedures listed in order of their occurrence: (1) AHQRETVR, which uses LXLNGPRC to create and run the sliding average mode retrieval program; (2)

AHQIAVGS, the procedure that employs IXSLDAVG to compute the sliding averages, and (3) AHQELIST, the procedure which invokes EXRPTLST to take the answer file (in this case a sliding-average file, ITSLDA32) and list it.

A control card is included for each of the last two programs, the sliding average calculator and the detail list program. The specifications are again as they were in Test 29: the sliding average interval is 3, and there is no restriction on values to be displayed.

AQDHS-II TEST 33

Listing of Data from Test 27 (1976 Data)

This is similar to Test 30. Here, the standard answer file created in Test 27 is listed as it is, without any alterations. Only the detail list program EXRPTLST, which is invoked by the procedure AHQELIST, is needed to perform this task. In the report option control card, displayed values are those not equal to zero.

AQDHS-II TEST 34

Split File from Test 26 into Two Separate Files and Merge Them Back Again

This run has the largest number of procedures executed of any in the entire test series. Yet despite this indication of complexity, the aim of the run is simple: to demonstrate the effectiveness of the merge procedure AHQMERGE. This is accomplished by first splitting the file into two complementary answer files, RTANSR15 and RTANSR16, then merging them again, and finally retrieving from both the original file and the merge file AQFINAL a set of two specific records which should match exactly, thus demonstrating the validity of the merge program.

The splitting process is accomplished with two executions of the retrieval procedure AHQRETVR. The first retrieval takes out all data from the Test 26 file that has a year greater than 1971. The second execution retrieves from the same master file all the other data, that is, all data with the year less than 1972.

Certainly, if these two answer files are merged properly, the resulting file should have the very same contents as the original master file from Test 26. The program AXMERGE, which performs this merging operation, is therefore invoked by procedure AHQMERGE. At this point, one check for proper merging can already be made. The number of records in the initial master file should equal the number in the merge file; this is the case, for each file contains 195 records.

However, more checking for accurate merging may be done. With this in mind, a retrieval on two specific records keys is made from each of the files to be compared, the initial master file and the merged file. For each file, this is accomplished by executing the procedure AHQRETVR. Then, the standard answer files from both retrievals are printed using the procedure AHQELIST. These listings reveal, as expected, that the same two records were retrieved from each file.

Test 34 is the only instance in the entire run series that uses the merging program AXMERGE. AXMERGE requires exactly two input master files; the program merges these files into a single file in record key order. Note that the two input file to AXMERGE used in this test have no record keys in common since they are separated from each other by the year field. AXMERGE requires, in fact, that there be no record keys common to the two input files. If it should find a record key in both files, it will terminate the merging process at that point.

In this test run, the merged file coming from AXMERGE is called AQFINAL (this is the lowest level index of its data set name). This file will be referred to in almost half of the remaining tests in which it is used as an input file.

AQDHS-II TEST 35

Process, Compile, and Link-Edit Retrieval Skeleton Program for Later Execution

This test run and the next one split the retrieval procedure AHQRETVR into two separate procedures. Recall that AHQRETVR is divided into 4 steps: (1) execution of the program LXLNGPRC which fills in the retrieval skeleton; (2) compilation of the resulting program; (3) link-editing of the program; and (4) execution of the program, which results in the retrieval being carried out. In this test, only the first three steps are executed. At the end of this run, a program will be compiled and link-edited which will be capable of retrieving, in this case, all the records from a master file that are from site number 1 in Hawaii.

The advantage of using AHQRTRCL rather than the more expansive procedure AHQRETVR may be seen when one wishes to make repeated retrievals using the same retrieval language specifications. In this situation, if one were to rely on AHQRETVR, the skeleton program would have to be reproduced, re-compiled, and link-edited again each time the retrieval is needed. On the other hand, only one execution of AHQRTRCL would be needed to produce a link-edited retrieval program that can be executed any time and as often as the specified retrieval is needed.

AQDHS-II TEST 36

Execute the Retrieval Program Created in Test 35 to Retrieve Data from AQFINAL, The Master File from Test 34

This test simply represents the completion of the retrieval process started in Test 35. The execution of the output program (name) from Test 35, which would be the fourth step in the procedure AHQRETVR, is here the only step in a new catalogued procedure AHQRTRGO. Thus, one can see that an execution of the procedure AHQRTRCL (from the last Test) followed by an execution of AHQRTRGO using the output program from AHQRTRCL produces the same results as an execution of AHQRETVR. The input file was AQFINAL.

The standard answer file RTANSR36 produced by AHQRTRGO is listed by the detail list program in the procedure AHQELIST. The report options control card is omitted in this run; a warning message indicates that the list program assumes that the mean option is to be used and that all values are to be displayed.

AQDHS-II TEST 37

Exercise Error Messages of Transaction Editor

A break is taken from retrieval in this test run and the following one to demonstrate the proper functioning of the 66 error and warning messages that may be generated by the transaction editor program TXTREDIT. This is the largest number of error messages of any program in the AQDHS-II subsystem; the accuracy of each of these editing checks is necessary to insure the integrity of the master file each time it is updated.

In this run, 292 errors are detected by TXTREDIT; from these, 65 of the 66 different error and warning messages appear. On the options card for this test, one of the keywords that appears is 'FLAGW,' which indicates that the warning messages as well as the error messages are to appear in the diagnostic listing; 3 of the 66 edit checks produce only warning-level messages.

Note that in this test AHQTEDIT, the transaction edit procedure, is not followed up by AHQMFUPD, the file maintenance procedure. The purpose of this run is not to update any existing master file but only to test the various edit checks. The valid transactions will not be used in any of the remaining runs of the test series.

AQDHS-II TEST 38

Exercise Error Messages of Transaction Editor (Continued)

This run tests TXTRFDIT, the transaction editor, for the only error message that was not generated by Test 37. This message arises when an invalid option card is detected prior to the editing of any transactions. The only valid keywords for the option card are 'LIST,' 'NOLIST,' 'FLAGW,' and 'NOFLAGW.' As the diagnostic messages listing indicates, the option card image for this test run is 'UTTER NONSENSE.' The error message itself indicates that the run is aborted. This is the reason why this error could not be included with the 65 other error messages in Test 37; no other input records would be edited when this error occurred, so no other errors could be detected.

AQDHS-II TEST 39

Retrieve Positive Temperature Data from AQFINAL, Output File from Test 34

The next nine tests, including this one, involve retrieval with a variety of retrieval specifications and answer file types. All retrievals in these tests will be made from AQFINAL.

In this run, positive temperature data is specified for retrieval. The fact that the data called for is "positive" has particular significance; only through a recent update of the AQDHS-II subsystem, has negative data become acceptable to the system. The retrieval is accomplished using the series of two procedures AHQRTRCL and AHQRTRGO rather than the single procedure AHQRETVR. Recall that AHQRTRCL produces the link-edited retrieval program, and AHQRTRGO executes that program to retrieve the data. The standard answer file RTANSR39 is listed using the procedure AHQELIST. The mean option is used in the detail list, and all values are displayed.

AQDHS-II TEST 40

Retrieve All Negative Data from AQFINAL and Compute Sliding Averages

In this test run, all the negative data is retrieved. Again, two procedures are used to obtain the retrieval: (1) AHQRTRCL, which produces the link-edited retrieval program; and (2) AHQRTRGO, which executes this program.

The retrieval language specifications indicate that the answer file is to be in sliding average format. Logically, the next step in the job stream after the creation of the answer file RTANSR40 is the execution of AHQIAVGS, the procedure which invokes the sliding average computation program, IXSLDAVG; the options card for this program specifies a 5-reading interval for calculating the averages.

The last step in the test is the listing of the sliding average file ITAVGS40. AHQELIST is the detail list procedure; the report options control card indicates no restrictions are on the values to be listed.

AQDHS-II TEST 41

Retrieve from AQFINAL Data With Decimal Position of 1 and List Using Sum Option

This retrieval run has a variety of specifications in its retrieval language, but the chief criterion is that the data have a decimal code of 1 (in other words, that the data be expressed in tenths). Retrieval is accomplished by the execution of the AHQRTRCL and AHQRTRGO procedures.

A detailed listing of the standard answer file RTANSR41 is performed using the AHQELIST procedure. Two departures from the report options that have been used in the previous run may be noted. First, the sum option is specified in this test. The primary differences between the mean option and the sum option are as follows: (1) summary information is taken only on each row in the sum option while in the mean option it is taken on both row and column; (2) the mean value of the readings in each row, calculated for the mean option, is replaced by the sum of the readings in that row when the sum option is specified; and (3) the maximum value of each row, which is given in the mean option, is omitted in the sum option. The other departure from the report options norm is the display criterion, which here allow only values greater than .1 to be listed. Although the retrieval specifications allow for negative data, none of the negative readings that appear in the answer file will be displayed for this reason.

AQDHS-II TEST 42

Retrieve Hourly Data From AQFINAL and Compute Sliding Average With Interval of 12

This run is another retrieval in sliding average format. The answer file RTANSR42 contains all hourly data. This test reverts to the single procedure AHQRETVR to perform its retrieval. Then, it executes the procedure AHQIAVGS to compute sliding averages; an interval of 12 readings for these calculations is indicated by the options card. Finally, the sliding file ITSLDA42 is listed using AHQELIST. The display criterion is that the data be greater than 1.

AQDHS-II TEST 43

Compute Sliding Average With Interval of 3 From Answer File in Test 42

The intermediate file in Test 42, which is the hourly data answer file RTANSR42 created directly from AQFINAL, is input to this program (name). New sliding averages are calculated for this same data file; this time an interval of 3 is used instead of the 12-reading interval in the preceding run. After the procedure AHQIAVGS is executed to produce the sliding average file, ITSLDA43, this file is listed by AHQELIST with all values being displayed. If one compares the values displayed in the detail list of the preceding test with the corresponding values in this test, one will notice a greater short-term fluctuation in the readings for this run. This is to be expected since this run has a shorter interval of averaging than that of the preceding run. The larger the number of values that one averages together, the smaller the contribution of any one of the values.

AQDHS-II TEST 44

Retrieve Certain Form 2 and Form 3 Data From AQFINAL and Compute Sliding Average Over an Interval of 6

This test and the following one mirror the action of Tests 42 and 43. They take the same answer file RTANSR44 and perform sliding averages on it over different intervals producing output file ITSLA44.

The sliding average answer file is now composed of all Form 2 and Form 3 wind speed data. The retrieval is accomplished by AHQRETVR. Sliding average values are calculated using AHQIAVGS, and the resulting file ITSLDA44 is listed by AHQELIST. The sliding average interval is six readings.

AQDHS-II TEST 45

Compute Sliding Average With Interval of 2 From Answer File in Test 44

This run produces the second sliding average calculation on the answer file (name) with Form 2 and Form 3 data that was retrieved in the last run. The calculations are performed over two-reading intervals using the procedure AHQIAVGS. After the sliding average file (ITSLAD45) is produced, it is listed using AHQELIST. One can compare the values generated in the last test, where the interval was 6, with those in this run, with the interval of 2. As with Tests 42 and 43, the averages calculated with the shorter interval show greater variability over a limited range than those computed with the longer interval.

AQDHS-II TEST 46

Retrieve a Standard Answer File From AQFINAL Based on the Data Field Values

This is the last retrieval in this series of test runs. The records selected are those which contain a reading in either of two disjoint sets: these are, roughly (1) all negative readings and (2) readings greater than 20. AHQRTRCL produces the link-edited retrieval program, and AHQRTRGO follows to execute this program. The next test run continues operations on this answer file RTANSR46.

AQDHS-II TEST 47

Do A Statistical Analysis on the File Retrieved in Test 46

For the last eight test runs, all listings of retrievals have all been of standard answer files or sliding average files. For variety, a statistical list will be produced for the answer file in the last run. First, the answer file must have a sentinel record appended to it; this is performed by the procedure AHQMSENT. Next, procedure AHQDANAL invokes the statistical analysis program to analyze the files. The output data file, STAT47B, from this procedure is listed by AHQSLIST.

AQDHS-II TEST 48

Convert SAROAD Transactions to AQDHS-II Transactions Without Option Card

This is the first of a series of three tests which demonstrate the various possiblities for the option card contents for CXCONVRT, the program invoked by AHQCNVRT which converts SAROAD transactions to AQDHS-II transactions. This option card determines whether the valid input and the output transactions will be listed. In this run, no option card is supplied. However, rather than aborting the run, the conversion program defaults to the option of not listing the valid transactions. Note that no matter what the option specified, the erroneous transactions are always listed.

AQDHS-II TEST 49

Convert SAROAD to AQDHS-II Transactions With List Option

In this run testing the CXCONVRT options, the option card is present and contains the word 'LIST.' This indicates that all input and output transactions, both good and bad, are to be listed.

AQDHS-II TEST 50

Convert SAROAD to AQDHS-II Transactions With NOLIST Specified

The only option possibility for CXCONVRT that has not been covered in the preceding two runs is used here. The option card is present, and 'NOLIST' is specified. Only those transactions in error are listed. Recall that this is the default option, as discussed in Test 48.

AQDHS-II TEST 51

Attempt to Convert Invalid SAROAD Transactions to AQDHS-II Transactions

This is the fourth test in succession that executes CXCONVRT. Although the default option of 'NOLIST' is taken here, all transactions are listed. The reason that this seeming inconsistency is true is that all the transactions are in error; no output transactions are generated by this run. Thus, this test amounts to an exercising of a good number of the edit checks in CXCONVRT.

AQDHS-II TEST 52

Try Running File Maintenance After Flagging Master File AQFINAL

The last two tests in this series demonstrate the relationship between MXSENTNL, DXSTATIS, and other programs. Recall that whenever a statistical analysis needs to be performed on an answer file, MXSENTNL must be executed to append a sentinel record and reformat the file before DXSTATIS may be used to analyze the file. This, of course, is because DXSTATIS is written in FORTRAN and so requires an end-of-file record and specific format to run successfully. Furthermore, no other program in AQDHS-II is written in FORTRAN; for this reason, DXSTATIS is the only program established to handle a master file with a sentinel record.

In this run, the procedure AHQMSENT invokes MXSENTNL to add the sentinel record to the master file. Then, AHQMFUPD is executed in an attempt to run the file maintenance program on the master file. This is impossible since the COBOL program FXFILMNT is not intended to handle a flagged file; as a result, the run is aborted.

AQDHS-II TEST 53

Try Running Statistical Analysis on Unflagged Master File AQFINAL

This final test in the series is, in a sense, the reverse of Test 52. There, a program other than DXSTATIS was run against a flagged master file. Here, DXSTATIS is run directly against an unflagged master when the procedure AHQDANAL is executed. However, the FORTRAN program DXSTATIS requires a sentinel program be executed on the master file prior to using it as input to DXSTATIS; since MXSENTNL is not executed beforehand, the run is aborted. In short, whenever DXSTATIS is run, MXSENTNL must be run first. Otherwise, DXSTATIS will not run.

EIS/P&R TEST 1

Create the Official NADB Emission Factors Table

In this test run, the official NADB Emission Factor table is created using the program TXTBLGEN. The catalogued procedure PNRTBGEN invokes the program TXTBLGEN which sorts the input transactions and then builds the Emission Factor Table. This program is not a table maintenance program but only a table generator program; therefore, in order to modify the table, you must regenerate the entire table.

EIS/P&R TEST 2

Convert NEDS Format Transactions and Merge them with EIS/P&R Transactions

In this test run, NEDS area and point source format transactions are converted to EIS/P&R format transactions and merged with transactions coded in EIS/P&R format.

The NEDS point source to EIS/P&R format conversion program CXNEDSCV is invoked by the catalogued procedure PNRCNVRT while the NEDS area to EIS/P&R format conversion program DXNEDSAS is invoked by the catalogued procedure PNRDCONV. After the NEDS transactions are converted to EIS/P&R format they are merged into one file by the program TXCONCAT which is invoked by the catalogued procedure PNRCNCAT. The merged file is then merged with the transactions coded in EIS/P&R format. This file is then sorted into the proper sequence using the transaction sorter program IXTRNSRT which is invoked by the catalogued procedure PNRISORT.

EIS/P&R TEST 3

Create the Initital EIS/P&R Master File

In this test run, the sorted transactions file created in test 2 is processed by the emission factors insertion program KXEMFINS which is invoked by the catalogued procedure PNRKEFIN. After the emission factors are inserted, the initial master file is then created by the file maintenance program FXFILMNT which is invoked by the catalogued procedure PNRFUPDT. A detailed explanation of the file maintenance program can be found in Section 3.1 of the EIS/P&R Documentation Manual (EPA-450/3-74-045-a).

EIS/P&R TEST 4

Produce the Area Source Report

In this test run, an area source report of the area source data in the initial master file is generated by the program HXANREPT, which is invoked by the catalogued procedure PNRHREPT.

A detailed explanation of the area source report program can be found in Section 4.4 of the EIS/P&R Documentation Manual.

EIS/P&R TEST 5

Detail List of EIS/P&R File

In this test run, the complete EIS/P&R master file created in Test 3 is listed by the program PXFILPRT which is invoked by the catalogued procedure ONRPREPT. A detailed discussion of the master file print program can be found in Section 4.3 of the EIS/P&R Documentation Manual.

EIS/P&R TEST 6

Update the Master File

In this test run, the file maintenance program is used to update the master file. As in all file maintenance runs, the transactions should be run through the transaction sorter before being processed by file maintenance.

EIS/P&R TEST 7

Update the Master File

In this test run, the file maintenance program is used to update the master file. As in all file maintenance runs, the transactions should be run through the transaction sorter before being processed by file maintenance.

EIS/P&R TEST 8

File Maintenance Using Generated Transactions

In this test run, a user Emission Factor Table is created using the catalogued procedure PNRTBGEN. This emission factor file is then used in conjunction with the program EXTRNGEN to generate EIS/P&R transactions which are used to update the master file. This procedure is called an automatic file update and is used when emission factors or SCC's are added or changed.

EIS/P&R TEST 9

Retrieval

The Retrieval Language Processor program generates the actual Retrieval program based on English-like requests entered by the user. These retrieval requests are edited and, if no severe error is found, the Retrieval program is compiled and executed to extract any data meeting the user's specification. Those records in the Master File which have qualified are placed in a separate

Answer File for processing. The records in the Answer File are in the same order and have the same formats as the records in the Master File. The Answer File, therefore, may be used by any program which accepts the Master File for processing. Care should be used, however, as modifications to the Answer File will not be reflected in the Master File. In other words, performing an update on an Answer File will not update the Master File.

Every retrieval request contains two control cards in addition to the retrieval specification. The $$END card signals the end of the request. The $$SELECT card signals the beginning of the request and the type of request. There are three different types of request: EIS/P&R retrieval language specifications, inline COBOL language specifications, and copied COBOL language specifications.

EIS/P&R TEST 10

Master File Sort

The Master File Sorter program produces an Answer File sorted as specified in the input to the Master File Sorter Generator program. This Answer File can be used as input to the Retriever, the Summary Report, and the File List programs. The contents of the Answer File varies depending on what files are being used for the sort.

For sort purposes, a logical record consists of the fixed segment (type 0 record), point source segments (type 1 record), machine process segments (type 2 record), and permits and registration segments (type 3 record). The machine process fields in the repeating portion of the machine process (type 2) record and all fields of the permits and registration records cannot be used for sort fields. All type 3 records are ignored by the Master File Sorter and do not ever appear in the Answer File produced by the Master File Sorter.

The Answer Files generated by the sort program will differ, depending on which type record the sort fields are in. Although the Answer File generated by the sort program will be in Master File format, the content of the Answer File will differ depending on the record type in which the sort fields reside. The following will illustrate these differences.

a) Sort fields from the fixed segment (record type 0).

A logical record will be generated for each sorted type 0 record. Each type 0 record will be accompanied by its associated type 1 and type 2 records. No new records are created.

b) Sort fields from the fixed portion of the point source segment (record type 1).

A logical record will be generated for each sorted type 1 record. Each type 1 record will be accompanied by its associated type 2 records and for each type 1 record, the proper type 0 record will be created. The new records created are the type 0 records, since each type 1 record now physically carries its own type 0 record (as opposed to the Master File in which a type one record along with other type one records are under a 0 record).

c) Sort fields from the repeating portion of the point source segment (record type 1).

A logical record will consist of a new sorted type 1 record for each repetition in the type 1 record. Each of these newly created type 1 records will have the original type 1's and 2 records and type 0 record created also. The new records created are type 1 records because each repetition now becomes its own individual type 1 record and type 0 and 2 records because the new type 1 record must physically include its type 0 and 2 records with each new type 1 record created from a type 1 repetition.

d) Sort fields are from the fixed portion of the machine process segment (record type 2).

A logical record will be generated for each sorted type 2 record. For each type 2 record, the proper type 0 and type 1 record will be created. The new records created are the type 0 and type 1 records, since each type 2 record now carries its own type 0 and type 1 records.

e) Sort fields are from the repeating portion of the point source segment (record type 1) and the fixed portion of the machine process (record type 2).

A logical record will consist of one newly sorted type 1 repetition record (created as its own complete physical type 1 record), one sorted type 2 record (broken from the other type 2 records) and the corresponding type 0 records. For example, from one logical record in the Master File consisting of a type 0 record, a type 1 record with three repetitions, and two type 2 records, the sort program will generate these six logical records:

[(type 0, type 1 (repeat 1), type 2 (1)),
(type 0, type 1 (repeat 2), type 2 (1)),
(type 0, type 1 (repeat 3), type 2 (1)),
(type 0, type 1 (repeat 1), type 2 (2)),
(type 0, type 1 (repeat 2), type 2 (2)),
(type 0, type 1 (repeat 3), type 2 (2))]

The sort order of all these logical records (as explained in a through e) in the Answer File will be dependent on the control cards input to the Master File Sorter Generator program. The sort order will be determined by the sequence of these cards. The first will be the high subfield of the sort key (most significant), the next will be the next lower subfield, ...and the last will be the lowest (least significant).

EIS/P&R TEST 11

Summary Report on File Created in Test 10

In this test run, a summary report on POLLUTANT-ID and AQCR is generated from the file created in Test 10.

If you notice in the sample runstream, that the IBM utility IEBGENER is used to create a disk file with the compile statements for the summary program. This is done to provide the same device types for the input files to the compiler.

EIS/P&R TEST 12

Retrieval on Pollutants '42401,' '11101' and '43101'

In this test run, a retrieval is run to create an answer file consisting of records containing pollutants of '42401,' '11101' and '43101.'

EIS/P&R TEST 13

Sort the Answer File Created in Test 12

In this test run, the file created in Test 12 is sorted on POLLUTANT-ID. This test is similiar to Test 10.

EIS/P&R TEST 14

Generate a Summary Report on the File Created in Test 13

In this test run, a summary report is generated for the file created in Test 13. In this test run, the file is summarized by pollutant.

EIS/P&R TEST 15

Retrieval Using a Copy Member

In this test run, the retrieval program is executed using a member which contains the retrieval language statements.

EIS/P&R TEST 16

Sort the Answer File Created in Test 15

In this test run, the file created in Test 15 is sorted on POLLUTANT-ID, AQCR, COUNTY, and PLANT-ID.

EIS/P&R TEST 17

Generate a Summary Report from the File Created in Test 16

In this test run, the file created in Test 16 is summarized by pollutant.

EIS/P&R TEST 18

Retrieve All Area Source Data from the Current Master File

In this test run, all area source data is retrieved from the master file. After the data has been retrieved, it is processed through the EIS/P&R to NEDS area source conversion program AXASNEDS (invoked by the catalogued procedure PNRANCNV) to create a file of NEDS formatted area source cards. An area source report is then created for the NEDS area source files.

EIS/P&R TEST 19

Retrieve the Point Source Data and Convert it to NEDS Format

In this test run, all point sources are retrieved from the master file and converted to NEDS format for submission to NEDS.

EIS/P&R TEST 20

Ad Hoc Run

In this run, an answer file is retrieved from the master file consisting of all records containing any pollutants. This file is then sorted and summarized. The runstream for this test incorporates into one runstream several similiar runstreams which were run separately in previous test runs.

EIS/P&R TEST 21

AD HOC RUN

In this test, the current EIS/P&R master file is updated with change transactions having a date of record of '73025'. Then, using the retrieval program and the new EIS/P&R master file as input, an answer file consisting of records having a date of record greater than '73001' is created. This answer file is then used as input to the EIS/P&R to NEDS conversion program to provide NEDS transactions of the changes.

EIS/P&R TEST 22

File Maintenance using Type 30 Cards

In this test run, the master file created in Test 21 is updated by adding type 30 records. The type 30 add cards generate a segment 3 record in the master file which is the Permits and Registration Segment.

EIS/P&R TEST 23

Retrieve and Print All Segment 3 Data

In this test run, an answer file consisting of all plants containing any segment-3 records is created from the EIS/P&R master file created in Test 22. This answer file is then printed by the detail list program.

EIS/P&R TEST 24

Retrieve and Generate EIS/P&R Transactions

In this test run, the retrieval program is executed to retrieve a single plant within a county. This answer file is then used to generate EIS/P&R transactions for that plant for future use.

EIS/P&R TEST 25

Add a Machine Process

In this test run, segment 2 records are merged with the transactions generated in Test 24. After the transactions are merged they are sorted into the proper sequence and saved in a disk file.

EIS/P&R TEST 26

Update the Master File

In this test run, the transactions prepared in Test 25 are applied to the current EIS/P&R Master File.

EIS/P&R TEST 27

Retrieve and List the Plant Update in Test 26

In this test run, the plant updated in Test 26 is retrieved and listed.

EIS/P&R TEST 28-31

EXTRNGEN EXAMPLES

In these test runs, the transaction generator program, EXTRNGEN (invoked by PNREFUPD), was exercised using all four modes: A, X, T, and N.

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EIS/P&R TEST31 417

APPENDIX C

Appendix C contains listings of the job stream (JCL and test data) used to run the AQDHS-II and the EIS/P&R test run series. The JCL is for use on an IBM OS/MVT computer. The listings for the AQDHS-II series illustrate the JCL needed to run using the baseline system at the Washington Computer Center (WCC). The procedure names are unique for the baseline system. For each run, the prefix AHQ must be replaced by AQS to reflect the standard procedure names. The listings for the EIS/P&R series show JCL used at the TUCC computer, Research Triangle Park, North Carolina. Both series show local project and file names. These would need to be changed to be run on a users own system.

As an example of how to use these listings and to run the test series, we will use the AQDHS-II system. The EIS/P&R system is run similarly. The AQDHS-II system as sent in an initial installation package is contained in five partitioned data sets. Using the names given in the installation deck (see Figure 3.15), these are

a) CDHS.AQS.JCL, containing the JCL procedures needed to run the system

b) CDHS.AQS.JOBS, containing the test run series

c) CDHS.AQS.SOURCE, containing the program source modules

d) CDHS.AQS.SYSIN, containing control cards needed for system sorts used in the procedures

e) CDHS.AQS.LOAD, not actually on the installation tape, but which contains the load modules produced when the source programs are compiled and link-edited at the installation

All five data sets are needed to run the test job series.

The test runs as found in CDHS.AQS.JOBS are illustrated in Appendix B. All data needed to build the files and to test the system is included in the test run job streams. Brief descriptions of each job, including the procedures, programs and files used, can be found in Appendix B of this report. Information on the JCL procedures can be found in the Appendix D of the AQDHS-II program documentation and User's Guide (EPA-450/3-74-045-1). Each procedure has parameters defined for project name, file names, and other system features. It is very likely that these parameters will differ for a given installation from what appears in the listings. Changes can be made using the information from the AQDHS-II documentation. The data files are shown as created on 3330 disks. If the system is implemented using another size disk, or if an installation assigns space by cylinders rather than tracks, the unit and space related parameters will need to be changed. Information of the EIS/P&R procedures can be found in Appendix A of the EIS/P&R Program Documentation and User's Guide (EPA-450/3-74-045-a). Further information on the test runs, including sample output from each run, can be found in documentation for the CDHS workshops.

As described in Appendix B, both test run series begin by building validation files needed for editing transactions and for reports. Then, programs used to convert NEDS or SAROAD transactions to CDHS format are run. These transactions are used to build CDHS master files. From these multiple retrievals, reports and other file maintenance programs are run. All programs of the system are tested.

TEST01

```
//EPALMH01  JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//KILL EXEC PGM=IEFBR14
//DD1 DD  DISP=(OLD,DELETE),UNIT=3330,
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTPRM1AA
//DD2 DD  DISP=(OLD,DELETE),UNIT=3330,
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTPRM2AA
//DD3 DD  DISP=(OLD,DELETE),UNIT=3330,
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.NTPRM1AA
//*  TEST 1  -  BUILD THE PARAMETER CODE TABLE
//*
//TEST1A  EXEC AMQMUP01,
//          OUT=P,
//          NEWMST1=HTPRM1AA,
//          NEWMST2=HTPRM2AA
//*
//* BUILD VALID PARM, METHOD UNIT TABLE
//*
//SORT.INPUT DD *
111101910100010TOTAL SUSPENDED PARTICULATE   HI-VOL                             00000100
211101910100010GRAVIMETRIC                 U-GMS/M3 (25DEG C,1013 M-BARS)
111101920200111TOTAL SUSPENDED PARTICULATE   MEMBRANE SAMPLE                    00000300
211101920200111GRAVIMETRIC                 U-GMS/M3 (0DEG C, 1013 M-BARS)       00000400
111201810900012SOILING INDEX (COH/1000LF)     TAPE SAMPLER                      00000500
211201810900012TRANSMITTANCE               COHS/1000 LINEAR FEET                00000600
121101519001432TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00000900
221101519001432GRAVIMETRIC                 TONS/SQUARE MILE-MONTH               00001000
121101519100052TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00001100
221101519100052GRAVIMETRIC                 M-GMS/SQUARE CENTIMETER-MONTH        00001200
121101719001432TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00001500
221101719001432GRAVIMETRIC (APCA)          TONS/SQUARE MILE-MONTH               00001600
121101719100052TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00001700
221101719100052GRAVIMETRIC (APCA)          M-GMS/SQUARE CENTIMETER-MONTH        00001800
121101819001432TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00002100
221101819001432GRAVIMETRIC (ASTM)          TONS/SQUARE MILE-MONTH               00002200
121101819100052TOTAL SETTLED PARTICULATE      BUCKET; JAR                       00002300
221101819100052GRAVIMETRIC (ASTM)          M-GMS/SQUARE CENTIMETER-MONTH        00002400
142101110505753CARBON MONOXIDE                INSTRUMENTAL                      00002700
242101110505753NONDISPERSIVE INFRA-RED  M-GMS/M3 (25DEG C,1013 M-BARS)          00002800
142101110606283CARBON MONOXIDE                INSTRUMENTAL                      00002900
242101110606283NONDISPERSIVE INFRA-RED  M-GMS/M3 (0DEG C, 1013 M-BARS)          00003000
142101110700041CARBON MONOXIDE                INSTRUMENTAL                      00003100
242101110700041NONDISPERSIVE INFRA-RED  PARTS PER MILLION (VOL/VOL)             00003200
142101120700041CARBON MONOXIDE                INSTRUMENTAL                      00003300
242101120700041COULUMETRIC                 PARTS PER MILLION (VOL/VOL)          00003400
142101210500632CARBON MONOXIDE                INSTRUMENTAL                      00003500
242101210500632FLAME IONIZATION            M-GMS/M3 (25DEG C,1013 M-BARS)       00003600
142101210700041CARBON MONOXIDE                INSTRUMENTAL                      00003700
242101210700041FLAME IONIZATION            PARTS PER MILLION (VOL/VOL)          00003800
142102110700010CARBON DIOXIDE                 INSTRUMENTAL                      00004100
242102110700010INFARARED ABSORPTION        PARTS PER MILLION (VOL/VOL)          00004200
142102910500181CARBON DIOXIDE                 GAS BUBBLER                       00004300
242102910500181PHENOLPHTHALEIN             M-GMS/M3 (25DEG C,1013 M-BARS)       00004400
142102910700010CARBON DIOXIDE                 GAS BUBBLER                       00004500
```

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TEST01
          242102910700010PHENOLPHTHALEIN         PARTS PER MILLION (VOL/VOL)     00004600
          142401110202861SULFUR DIOXIDE               INSTRUMENTAL               00004700
          242401110202861WEST-GAEKE COLORIMETRIC  U-GMS/M3 (0DEG C, 1013 M-BARS)  00004800
          142401110700012SULFUR DIOXIDE               INSTRUMENTAL               00004900
          242401110700012WEST-GAEKE COLORIMETRIC  PARTS PER MILLION (VOL/VOL)     00005000
          142401110800100SULFUR DIOXIDE               INSTRUMENTAL               00005100
          242401110800100WEST-GAEKE COLORIMETRIC  PARTS PER BILLION (VOL/VOL)     00005200
          142401130102621SULFUR DIOXIDE               INSTRUMENTAL               00005300
          242401130102621CONDUCTOMETRIC           U-GMS/M3 (25DEG C,1013 M-BARS)  00005400
          142401130202861SULFUR DIOXIDE               INSTRUMENTAL               00005500
          242401130202861CONDUCTOMETRIC           U-GMS/M3 (0DEG C, 1013 M-BARS)  00005600
          142401130700012SULFUR DIOXIDE               INSTRUMENTAL               00005700
          242401130700012CONDUCTOMETRIC           PARTS PER MILLION (VOL/VOL)     00005800
          142401130800100SULFUR DIOXIDE               INSTRUMENTAL               00005900
          242401130800100CONDUCTOMETRIC           PARTS PER BILLION (VOL/VOL)     00006000
          142401140102621SULFUR DIOXIDE               INSTRUMENTAL               00006100
          242401140102621COULOMETRIC              U-GMS/M3 (25DEG C,1013 M-BARS)  00006200
          142401140202861SULFUR DIOXIDE               INSTRUMENTAL               00006300
          242401140202861COULOMETRIC              U-GMS/M3 (0DEG C, 1013 M-BARS)  00006400
          142401140700012SULFUR DIOXIDE               INSTRUMENTAL               00006500
          242401140700012COULOMETRIC              PARTS PER MILLION (VOL/VOL)     00006600
          142401140800100SULFUR DIOXIDE               INSTRUMENTAL               00006700
          242401140800100COULOMETRIC              PARTS PER BILLION (VOL/VOL)     00006800
          142401150102861SULFUR DIOXIDE               INSTRUMENTAL               00006900
          242401150102861THOMAS AUTOMETER         U-GMS/M3 (25DEG C,1013 M-BARS)  00007000
          142401150202621SULFUR DIOXIDE               INSTRUMENTAL               00007100
          242401150202621THOMAS AUTOMETER         U-GMS/M3 (0DEG C, 1013 M-BARS)  00007200
          142401150800100SULFUR DIOXIDE               INSTRUMENTAL               00007500
          242401150800100THOMAS AUTOMETER         PARTS PER BILLION (VOL/VOL)     00007600
          142401160102621SULFUR DIOXIDE               INSTRUMENTAL               00007700
          242401160102621FLAME PHOTOMETRIC        U-GMS/M3 (25DEG C,1013 M-BARS)  00007800
          142401170700042SULFUR DIOXIDE               INSTRUMENTAL               00007900
          242401170700042POLAROGRAPHIC DYNA SCIENCPARTS PER MILLION (VOL/VOL)     00008000
          142401230800100SULFUR DIOXIDE               INSTRUMENTAL               00008100
          242401230800100WILSON SAMPLER           PARTS PER BILLION (VOL/VOL)     00008200
          142401310102621SULFUR DIOXIDE               DAVIS INSTRUMENT           00008300
          242401310102621HYDROGEN PEROXIDE        U-GMS/M3 (25DEG C,1013 M-BARS)  00008400
          142401330202861SULFUR DIOXIDE               DAVIS INSTRUMENT           00008500
          242401330202861SEQUENTIAL-CONDUCTOMETRICU-GMS/M3 (0DEG C, 1013 M-BARS)  00008600
          142401910700194SULFUR DIOXIDE               GAS BUBBLER                00008700
          242401910700194WEST-GAEKE SULFAMIC ACID PARTS PER MILLION (VOL/VOL)     00008800
          142401920800191SULFUR DIOXIDE               GAS BUBBLER                00008900
          242401920800191WEST-GAEKE               PARTS PER BILLION (VOL/VOL)     00009000
          142401930700194SULFUR DIOXIDE               GAS BUBBLER                00009100
          242401930700194CONDUCTOMETRIC           PARTS PER MILLION (VOL/VOL)     00009200
          142401940100050SULFUR DIOXIDE               GAS BUBBLER                00009300
          242401940100050HYDROGEN PEROXIDE        U-GMS/M3 (25DEG C,1013 M-BARS)  00009400
          142602110101881NITROGEN DIOXIDE             INSTRUMENTAL               00009500
          242602110101881COLORIMETRIC             U-GMS/M3 (25DEG C,1013 M-BARS)  00009600
          142602110202051NITROGEN DIOXIDE             INSTRUMENTAL               00009700
          242602110202051COLORIMETRIC             U-GMS/M3 (0DEG C, 1013 M-BARS)  00009800
          142602110700012NITROGEN DIOXIDE             INSTRUMENTAL               00009900
          242602110700012COLORIMETRIC             PARTS PER MILLION (VOL/VOL)     00010000
          142602110800100NITROGEN DIOXIDE             INSTRUMENTAL               00010100
          242602110800100COLORIMETRIC             PARTS PER BILLION (VOL/VOL)     00010200
          142602120101881NITROGEN DIOXIDE             INSTRUMENTAL               00010300
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TEST01
          242602120101881COLORIMETRIC             U-GMS/M3 (25DEG C,1013 M-BARS)  00010400
          142602120700012NITROGEN DIOXIDE              INSTRUMENTAL               00010500
          242602120700012COLORIMETRIC             PARTS PER MILLION (VOL/VOL)     00010600
          142602130202051NITROGEN DIOXIDE              INSTRUMENTAL               00010700
          242602130202051COULOMETRIC              U-GMS/M3 (0DEG C, 1013 M-BARS)  00010800
          142602140700012NITROGEN DIOXIDE              INSTRUMENTAL               00010900
          242602140700012CHEMILUMINESCENCE        PARTS PER MILLION (VOL/VOL)     00011000
          142602140800100NITROGEN DIOXIDE              INSTRUMENTAL               00011100
          242602140800100CHEMILUMINESCENCE        PARTS PER BILLION (VOL/VOL)     00011200
          142602150107521NITROGEN DIOXIDE              INSTRUMENTAL               00011300
          242602150107521POLAROGRAPHIC DYNA SCIENCU-GMS/M3 (25DEG C,1013 M-BARS)  00011400
          142602610200551NITROGEN DIOXIDE              GAS BUBBLER                00011500
          242602610200551SALTZMAN (999 AP-11)     U-GMS/M3 (0DEG C, 1013 M-BARS)  00011600
          142602610700274NITROGEN DIOXIDE              GAS BUBBLER                00011700
          242602610700274SALTZMAN (999 AP-11)     PARTS PER MILLION (VOL/VOL)     00011800
          142602710100050NITROGEN DIOXIDE              GAS BUBBLER                00011900
          242602710100050JACOBS-HOCHHEISER        U-GMS/M3 (25DEG C,1013 M-BARS)  00012000
          142602720200551NITROGEN DIOXIDE              GAS BUBBLER                00012100
          242602720200551SALTZMAN(50ML TU+ORIFICE)U-GMS/M3 (0DEG C, 1013 M-BARS)  00012200
          142602720700274NITROGEN DIOXIDE              GAS BUBBLER                00012300
          242602720700274SALTZMAN(50ML TU+ORIFICE)PARTS PER MILLION (VOL/VOL)     00012400
          142602810100050NITROGEN DIOXIDE              GAS BUBBLER                00012500
          242602810100050JACOBS-HOCHHEISER        U-GMS/M3 (25DEG C,1013 M-BARS)  00012600
          142602820700274NITROGEN DIOXIDE              GAS BUBBLER                00012700
          242602820700274SALTZMAN(100ML TU+ORIFIC)PARTS PER MILLION (VOL/VOL)     00012800
          142602840100050NITROGEN DIOXIDE              GAS BUBBLER                00012900
          242602840100050NASN SODIUM ARSENITE     U-GMS/M3 (25DEG C,1013 M-BARS)  00013000
          142602840200551NITROGEN DIOXIDE              GAS BUBBLER                00013100
          242602840200551NASN SODIUM ARSENITE     U-GMS/M3 (25DEG C,1013 M-BARS)  00013200
          142602910700274NITROGEN DIOXIDE              GAS BUBBLER                00013300
          242602910700274JACOBS-HOCHHEISER        PARTS PER MILLION (VOL/VOL)     00013400
          142602940200551NITROGEN DIOXIDE              GAS BUBBLER                00013500
          242602940200551NASN SODIUM ARSENITE     U-GMS/M3 (0DEG C, 1013 M-BARS)  00013600
          142602950100050NITROGEN DIOXIDE              GAS BUBBLER                00013700
          242602950100050TEA METHOD               U-GMS/M3 (25DEG C,1013 M-BARS)  00013800
          142602960200551NITROGEN DIOXIDE              GAS BUBBLER                00013900
          242602960200551TGS METHOD               U-GMS/M3 (0DEG C, 1013 M-BARS)  00014000
          142603110700012OXIDES OF NITROGEN            INSTRUMENTAL               00014100
          242603110700012COLORIMETRIC             PARTS PER MILLION (VOL/VOL)     00014200
          142603110800100OXIDES OF NITROGEN            INSTRUMENTAL               00014300
          242603110800100COLORIMETRIC             PARTS PER BILLION (VOL/VOL)     00014400
          142603130700012OXIDES OF NITROGEN            INSTRUMENTAL               00014500
          242603130700012COLORIMETRIC             PARTS PER MILLION (VOL/VOL)     00014600
          142603990100050OXIDES OF NITROGEN            GAS BUBBLER                00014700
          242603990100050SALTZMAN METHOD          U-GMS/M3 (25DEG C,1013 M-BARS)  00014800
          142603990700274OXIDES OF NITROGEN            GAS BUBBLER                00014900
          242603990700274SALTZMAN METHOD          PARTS PER MILLION (VOL/VOL)     00015000
          143101110101330TOTAL HYDROCARBONS            INSTRUMENTAL               00015100
          243101110101330FLAME IONIZATION         U-GMS/M3 (25DEG C,1013 M-BARS)  00015200
          143101110201330TOTAL HYDROCARBONS            INSTRUMENTAL               00015300
          243101110201330FLAME IONIZATION         U-GMS/M3 (0DEG C, 1013 M-BARS)  00015400
          114101110700021TOTAL HYDROCARBONS            INSTRUMENTAL               00015500
          214101110700021FLAME IONIZATION         PARTS PER MILLION               00015600
          143501110200551ALDEHYDE                      INSTRUMENTAL               00015700
          243501110200551COLORIMETRIC             U-GMS/M3 (0DEG C, 1013 M-BARS)  00015800
          143501110700043ALDEHYDE                      INSTRUMENTAL               00015900
```

```
TEST01
           243501110700043COLORIMETRIC               PARTS PER MILLION (VOL/VOL)     00016000
           143501910100050ALDEHYDE                        GAS BUBBLER                00016100
           243501910100050MBTH                       U-GMS/M3 (25DEG C,1013 M-BARS)  00016200
           143501910700043ALDEHYDE                        GAS BUBBLER                00016300
           243501910700043MBTH                       PARTS PER MILLION (VOL/VOL)     00016400
           143501920200551ALDEHYDE                        GAS BUBBLER                00016500
           243501920200551PARAROSANILINE             U-GMS/M3 (0DEG C, 1013 M-BARS)  00016600
           143501920700043ALDEHYDE                        GAS BUBBLER                00016700
           243501920700043PARAROSANILINE             PARTS PER MILLION (VOL/VOL)     00016800
           143502910100051FORMALDEHYDE                    GAS BUBBLER                00016900
           243502910100051CHROMATROPIC ACID          U-GMS/M3 (25DEG C,1013 M-BARS)  00017000
           143502910200061FORMALDEHYDE                    GAS BUBBLER                00017100
           243502910200061CHROMATROPIC ACID          U-GMS/M3 (0DEG C, 1013 M-BARS)  00017200
           144101110202141TOTAL OXIDANTS                  INSTRUMENTAL               00017300
           244101110202141ALKALINE KI                U-GMS/M3 (0DEG C, 1013 M-BARS)  00017400
           144101110900100TOTAL OXIDANTS                  INSTRUMENTAL               00017500
           244101110900100ALKALINE KI                PARTS PER BILLION (VOL/VOL)     00017600
           144101130101961TOTAL OXIDANTS                  INSTRUMENTAL               00017700
           244101130101961MAST MODEL 742-Z           U-GMS/M3 (25DEG C,1013 M-BARS)  00017800
           144101130700012TOTAL OXIDANTS                  INSTRUMENTAL               00017900
           244101130700012MAST MODEL 742-Z           PARTS PER MILLION (VOL/VOL)     00018000
           144101150101961TOTAL OXIDANTS                  INSTRUMENTAL               00018300
           244101150101961COLORIMETRIC NEUTRAL KIT U-GMS/M3 (25DEG C,1013 M-BARS)  00018400
           144101510700254TOTAL OXIDANTS                  GAS BUBBLER                00018500
           244101510700254PHENOLPHTALEIN             PARTS PER MILLION (VOL/VOL)     00018600
           144101810200551TOTAL OXIDANTS                  GAS BUBBLER                00018700
           244101810200551ALKALINE KI                U-GMS/M3 (0DEG C, 1013 M-BARS)  00018800
           161101201300011WIND SPEED                      INSTRUMENTAL
           261101201300011SPOT READING               KNOTS
           161101231300011WIND SPEED                      INSTRUMENTAL
           261101231300011SPOT READING LEVEL 3       MILES / HOUR
           161102211400101WIND DIRECTION                  INSTRUMENTAL
           261102211400101SPOT READING LEVEL 1       DEGREES
           161102501400101WIND DIRECTION                  INSTRUMENTAL
           261102501400101ELEC. OR MACHINE AVERAGE DEGREES
           161103231300011RESULTANT SPEED                 INSTRUMENTAL
           261103231300011VECTOR SUMMATION LEVEL 1 DEGREES
           161106201400101STD DEV OF HZ WIND DIR          INSTRUMENTAL
           261106201400101ARITHMETIC STANDARD DEV  DEGREES
           1612023129-9901LAPSE RATE                      INSTRUMENTAL
           2612023129-9901ELEC. / MACH. AVG. L3-L1
           1621012215-9990TEMPERATURE                     INSTRUMENTAL
           2621012215-9990SPOT READING LEVEL 2
           1621032217-9990DEW POINT                       INSTRUMENTAL
           2621032217-9990SPOT READING LEVEL 2
           162201122500101SOLAR RADIATION                 INSTRUMENTAL
           262201122500101TVA PYRANOMETER-AVG. 5-MIN RDG
           164101111600032BAROMETRIC PRESSURE             INSTRUMENTAL
           264101111600032ANEROID
           165303816700012CONDUCTIVITY                   PRECIP
           265303816900012CONDUCTIVITY CELL
           //UPDATE.AQSOLDT1  DD DUMMY
           //UPDATE.AQSOLDT2  DD DUMMY
           //TEST19  EXEC AHONSENT,
           //             OUT=P,
           //             DISP='NEW,CATLG,DELETE'
```

```
TEST01
          //*
          //* APPEND SENTINEL RECORD FOR USE BY DATA ANALYSIS
          //*
          //TEST1C EXEC AHQPMETH,UUT=P
```

TEST02

```
//EPALMH02 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//* TEST 2 - BUILD VALID SITE CODE TABLE
//KILL  EXEC PGM=IEFBR14
//STDS DD DISP=(OLD,DELETE),UNIT=3330,VOL=SER=CDMSPK,
//     DSN=CN.EPALMH.A087.CDMS.HQ.AQS.DATA.MTSITEAA
//*
//* BUILD VALID SITE CODE TABLE
//*
//TEST2A  EXEC AHQMUPD2,
//              OUT=P,
//              NEWMSTR=MTSITEAA
//SORT.INPUT DD *
100001001E02STATE = 10 (FLORIDA)  AREA CODE = 0001  SITE CODE = 001...  00000100
370001234F05STATE = 37 (OKLAHOMA)  AREA CODE = 0001  SITE CODE = 234..  00000200
200001004B03STATE = 20 (MAINE)  AREA CODE = 0001  SITE CODE = 004.....  00000300
120001001C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 001....  00000400
120001002C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 002....  00000500
120001003C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 003....  00000600
120001004C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 004....  00000700
120001005C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 005....  00000800
120001006C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 006....  00000900
120001007C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 007....  00001000
120001008C01STATE = 12 (HAWAII)  AREA CODE = 0001  SITE CODE = 008....  00001100
340001001A06STATE = 34 (N. CAR.)  AREA CODE = 0001  SITE CODE = 001...  00001200
340001002A06STATE = 34 (N. CAR.)  AREA CODE = 0001  SITE CODE = 002...  00001300
340001003A06STATE = 34 (N. CAR.)  AREA CODE = 0001  SITE CODE = 003...  00001400
340001004A06STATE = 34 (N. CAR.)  AREA CODE = 0001  SITE CODE = 004...  00001500
340002001D05STATE = 34 (N. CAR.)  AREA CODE = 0002  SITE CODE = 001...  00001600
340002003D05STATE = 34 (N. CAR.)  AREA CODE = 0002  SITE CODE = 003...  00001700
340002005D05STATE = 34 (N. CAR.)  AREA CODE = 0002  SITE CODE = 005...  00001800
340002007D05STATE = 34 (N. CAR.)  AREA CODE = 0002  SITE CODE = 007...  00001900
340003002G04STATE = 34 (N. CAR.)  AREA CODE = 0003  SITE CODE = 002...  00002000
340003004G04STATE = 34 (N. CAR.)  AREA CODE = 0003  SITE CODE = 004...  00002100
340003006G04STATE = 34 (N. CAR.)  AREA CODE = 0003  SITE CODE = 006...  00002200
340003008G04STATE = 34 (N. CAR.)  AREA CODE = 0003  SITE CODE = 008...  00002300
340003010G04STATE = 34 (N. CAR.)  AREA CODE = 0003  SITE CODE = 010...  00002400
//UPDATE.AQSOLDMS  DD DUMMY
//TEST2B EXEC AHQPSITE,OUT=P
```

TEST03

```
//EPALMH03 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL EXEC PGM=IEFBR14,REGION=4K
//DEL DD  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTSTNDAA,
//  VOL=SER=CDHSPK,
// UNIT=3330,DISP=(OLD,DELETE)
//*
//* BUILD PARAMETER STANDARDS TABLE
//*
//TEST3A  EXEC AMQHUP03,
//             OUT=P,
//             NEWMSTR=HTSTNDAA
//SORT.INPUT DD *
11101F01101     75 UG/M3 (25 C) ANNUAL GEOMETRIC MEAN                         00000100
11101F01201     60 UG/M3 (25 C) ANNUAL GEOMETRIC MEAN                         00000200
11101F02102     75 UG/M3 (0 C) ANNUAL GEOMETRIC MEAN                          00000300
11101F02202     60 UG/M3 (0 C) ANNUAL GEOMETRIC MEAN                          00000400
11101S01102     60 UG/M3 (0 C) ANNUAL GEOMETRIC MEAN
11101S01202     60 UG/M3 (0 C) ANNUAL GEOMETRIC MEAN
11101F03101    260 UG/M3 (25 C) 24 HOUR MAXIMUM, 1 PER YEAR.                  00000500
11101F03201    150 UG/M3 (25 C) 24 HOUR MAXIMUM, 1 PER YEAR.                  00000600
11101F04102    260 UG/M3 (0 C)  24 HOUR MAXIMUM, 1 PER YEAR.                  00000700
11101F04202    150 UG/M3 (0 C)  24 HOUR MAXIMUM, 1 PER YEAR.                  00000800
42401F01101    365 UG/M3 (25 C) .14 PPM  24 HR. MAX, 1 PER YR.                00000900
42401F01201    260 UG/M3 (25 C) .1  PPM  24 HR. MAX, 1 PER YR.                00001000
42401F02102    365 UG/M3 (0 C)  .14 PPM  24 HR. MAX, 1 PER YR.                00001100
42401F02202    260 UG/M3 (0 C)  .1  PPM  24 HR. MAX, 1 PER YR.                00001200
42401F03101     80 UG/M3 (25 C) .03 PPM ANNUAL ARITHMETIC MEAN                00001300
42401F03201     60 UG/M3 (25 C) .02 PPM ANNUAL ARITHMETIC MEAN                00001400
42401F04102     80 UG/M3 (0 C)  .03 PPM ANNUAL ARITHMETIC MEAN                00001500
42401F04202     60 UG/M3 (0 C)  .02 PPM ANNUAL ARITHMETIC MEAN                00001600
42401F05201   1300 UG/M3 (25 C) .5   PPM   3 HR. MAX, 1 PER YR.               00001700
42401F06202   1300 UG/M3 (0 C)  .5   PPM   3 HR. MAX, 1 PER YR.               00001800
42401S01102    850 UG/M3 (0 C)  .5   PPM   3 HR. MAX, 1 PER YR.
42401S01202    925 UG/M3 (0 C)  .5   PPM   3 HR. MAX, 1 PER YR.
42602F01101    100 UG/M3 (25 C) .05 PPM ANNUAL ARITHMETIC MEAN                00001900
42602F01201    100 UG/M3 (25 C) .05 PPM ANNUAL ARITHMETIC MEAN                00002000
42602F02102    100 UG/M3 (0 C)  .05 PPM ANNUAL ARITHMETIC MEAN                00002100
42602F02202    100 UG/M3 (0 C)  .05 PPM ANNUAL ARITHMETIC MEAN                00002200
42602S01102     90 UG/M3 (0 C)  .05 PPM ANNUAL ARITHMETIC MEAN
44101F01101    160 UG/M3 (25 C) .08 PPM   1 HR. MAX, 1 PER YR.                00002300
44101F01201    160 UG/M3 (25 C) .08 PPM   1 HR. MAX, 1 PER YR.                00002400
44101F02102    160 UG/M3 (0 C)  .08 PPM   1 HR. MAX, 1 PER YR.                00002500
44101F02202    160 UG/M3 (0 C)  .08 PPM   1 HR. MAX, 1 PER YR.                00002600
44101S01101    155 UG/M3 (25 C) .08 PPM   1 HR. MAX, 1 PER YR.
44101S0,201    165 UG/M3 (25 C) .08 PPM   1 HR. MAX, 1 PER YR.
42101F0110110,000 UG/M3 (25 C)   9 PPM   8 HR. MAX, 1 PER YR.                 00002700
42101F0120140,000 UG/M3 (25 C)  35 PPM   1 HR. MAX, 1 PER YR.                 00002800
42101F0210210,000 UG/M3 (0 C)    9 PPM   8 HR. MAX, 1 PER YR.                 00002900
42101F0220240,000 UG/M3 (0 C)   35 PPM   1 HR. MAX, 1 PER YR.                 00003000
43101F01101    160 UG/M3 (25 C) 3 HOUR MAXIMUM, 1 PER YEAR.                   00003100
43101F01201    160 UG/M3 (25 C) 3 HOUR MAXIMUM, 1 PER YEAR.                   00003200
43101F02102    160 UG/M3 (0 C)  3 HOUR MAXIMUM, 1 PER YEAR.                   00003300
43101F02202    160 UG/M3 (0 C)  3 HOUR MAXIMUM, 1 PER YEAR.                   00003400
43101S01102    120 UG/M3 (0 C)  3 HOUR MAXIMUM, 1 PER YEAR.
43101S01202    160 UG/M3 (0 C)  3 HOUR MAXIMUM, 1 PER YEAR.
61101F01113     TEST OF NEGATIVE DATA
```

```
TEST03
             61101F01213    TEST OF NEGATIVE DATA (1ST SECONDARY)
             61101F02113    TEST OF NEGATIVE DATA (2ND PRIMARY)
             61101F02213    TEST OF NEGATIVE DATA (2ND SECONDARY)
             61101S01123    TEST OF NEGATIVE DATA (1ST STATE PRIMARY)
             61101S01223    TEST OF NEGATIVE DATA (1ST STATE SECONDARY)
             61101S02123    TEST OF NEGATIVE DATA (2ND STATE PRIMARY)
             61101S02223    TEST OF NEGATIVE DATA (2ND STATE SECONDARY)
             61102F01114    TEST OF NEGATIVE DATA (1ST PRIMARY)
             61102F01214    TEST OF NEGATIVE DATA (SECONDARY)
             61102S01114    TEST OF NEGATIVE DATA (STATE PRIMARY)
             61102S01214    TEST OF NEGATIVE DATA (STATE SECONDARY)
             61103F01113    TEST OF NEGATIVE DATA
             61104F01114    TEST OF NEGATIVE DATA
             61104F01214    TEST OF NEGATIVE DATA  (SECONDARY)
             61104S01114    TEST OF NEGATIVE DATA  (STATE)
             61106F01114    TEST OF NEGATIVE DATA
             61106S01114    TEST OF NEGATIVE DATA  (STATE PRIMARY)
             61106S01214    TEST OF NEGATIVE DATA  (STATE SECONDARY)
             61202F01128    TEST OF NEGATIVE DATA
             61202F01228    TEST OF NEGATIVE DATA  (SECONDARY)
             61202S01128    TEST OF NEGATIVE DATA
             62101F01115    TEST OF NEGATIVE DATA
             62101F01215    TEST OF NEGATIVE DATA  (SECONDARY)
             62101S01115    TEST OF NEGATIVE DATA (STATE)
             62103F01122    TEST OF NEGATIVE DATA
             62201F01119    TEST OF NEGATIVE DATA
             62201F01219    TEST OF NEGATIVE DATA   (SECONDARY)
             62201S01119    TEST OF NEGATIVE DATA   (STATE)
             62201S01219    TEST OF NEGATIVE DATA   (STATE SEC.)
             62201S02219    TEST OF NEGATIVE DATA (2ND STATE SEC.)
             63301F01125    TEST OF NEGATIVE DATA
             64101F01122    TEST OF NEGATIVE DATA
             64101F01222    TEST OF NEGATIVE DATA  (SECONDARY)
             65303F01169    TEST OF NEGATIVE DATA
             65303F01269    TEST OF NEGATIVE DATA  (SECONDARY)
             65303S01169    TEST OF NEGATIVE DATA  (STATE)
             //UPDATE.AQSOLDTB  DD DUMMY
             //TEST38 EXEC AHQPSTDS,OUT=P
```

TEST04

```
//EPALMH04 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
//KILL EXEC PGM=IEFBR14,REGION=4K
//DEL  DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.OLDAQDHS,
// DISP=(OLD,DELETE),VOL=SER=CDHSPK,UNIT=3330
//*
//* TEST 4 - CONVERT EXISTING AQDHS FILE TO NEW AQDHS FILE
//*
//TEST4   EXEC AHQUBILD,OUT=P
//*
//* BUILD OLD FORMAT AQDHS FILE
//*
//BUILD.INPUT DD *
12E021000010014240111071007106012000100010001000100020002000100020003000300030000
300040006000200010001000000000000000000000000000000
12E021000010014240111071007106022000200030006000700100011001200130012001100090000
8000600060006000600060003000100040006000800070007
12E021000010014240111071007106032000700020001000100010001000100010003000300060000
3000200030003000600100011001100120013001600160016
12E021000010014240111071007106042001800200022002200220024001800180010000200010000
1000100010001000100010001000100010001000100020002
12E021000010014240111071007106052000300040004000400040005000600060006000600040000
4000300030003000300030006001800200034004400540060
12E021000010014240111071007106062008001000101010201020110011301100110012101100100
9008000800090007000990099009901000100010001210122
12E021000010014240111071007106072024802000201018101760154012101000090008000700060
0094000300020001000090008000700060006000600060006
12E021000010014240111071007106082000500050004000300020001000100010001000100010000
1000100010001000100010001000100010001000100010001
12E021000010014240111071007106092000100010001000100010001000100010001000100010000
1000100010001000100010001000100010001000100010001
12E021000010014240111071007106102000100010001000100010001000100010001000100010000
1000200020002000200020002000200020002000200020002
12E021000010014240111071007106112000200020002000200020002000200020002000200020000
2000200020002000200020002000200020002000200020002
12E021000010014240111071007106122000200020002000200020002000200020002000200020000
2000200020002000200020002000200020002000200020002
12E021000010014240111071007106132000200020002000200020002000200020002000200020000
2000200020002000200020002000200020002000200020002
12E021000010014240111071007106142000300030003000300030002000200020002000200020000
2000300030003000300030002000200020002000200020002
12E021000010014240111071007106152000300030003000300020002000200020002000200020000
2000300030003000300030002000200020002000200020002
12E021000010014240111071007106162000300030003000300030002000200020002000200020000
2000100010001000100020002000100020003000300030003
12E021000010014240111071007106172000400060002000100010000000000000000000000000000
0000200030006000700100011001200130012001100090008
12E021000010014240111071007106182000600060006000600060003000100040006000800070000
7000700020001000100010001000100010003000300060003
12E021000010014240111071007106192000200030003000600100011001100120013001600160001
6001800200022002200220024001800180010000200010001
12E021000010014240111071007106202000100010001000100010001000100010001000100020000
2000300040004000400040005000600060006000600040004
12E021000010014240111071007106212000300030003000300030006001800200034004400540006
0008001000101010201020110011301100110012101100109
12E021000010014240111071007106222008000800090009000990099009901000100010001210122
2024802000201018101760154012101000090008000700060
```

```
TEST04
            12E021000010014240111071007106232000400030002000100090008000700060006000600060006000
            6000500050004000300020001000100010001000100010001
            12E02100001001424011107100710624200010001000100010001000100010001000100010001000
            1000100010001000100010001000100010001000100010001
            12E02100001001424011107100710625200010001000100010001000100010001000100010001000
            1000100010001000100010001000100010001000100010001
            12E02100001001424011107100710626200020002000200020002000200020002000200020002000
            2000200020002000200020002000200020002000200020002
            12E02100001001424011107100710627200020002000200020002000200020002000200020002000
            2000200020002000200020002000200020002000200020002
            12E02100001001424011107100710628200020002000200020002000200020002000200020002000
            2000200020002000200020002000200020002000200020002
            12E02100001001424011107100710629200020002000200020002000200020002000200020002000
            2000300030003000300030002000200020002000200020002
            12E02100001001424011107100710630200030003000300030003000200020002000200020002000
            2000300030003000300020002000200020002000200020002
            //
```

TEST05

```
//EPALMH05 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
//*
//*  TEST 5 - CONVERT OLD FORMAT TRANSACTIONS AND UPDATE MASTER FILE
//*
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
//   VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ102976
//TEST5A  EXEC AHQBCNVT,OUT=P
//*
//* CONVERT OLD FILE TO NEW FORMAT TRANSACTIONS
//*
//TEST5B  EXEC AHQFUPDT,
//             OUT=P,
//             R1=100K,
//             R2=100K,
//             PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//             NEWMSTR=AQ102976
//*
//* BUILD NEW FORMAT AQDHS FILE
//*
//EDIT.OPTIONS DD *
NOLIST
//EDIT.INPUT  DD DSNAME=&&OLDTRNS,
//             DISP=(OLD,DELETE)
//UPDATE.AQSOLDMS  DD DUMMY
//UPDATE.INPUT DD *
NOLIST
//TEST5C  EXEC AHQELIST,
//  OUT=P,
//  REGION.REPORT=150K,
//  MSTRFIL=AQ102976
//*
//* PRODUCE DETAIL LIST OF MASTER FILE
//*
//REPORT.INPUT  DD *
MEAN
//
```

TEST06

```
//EPALMH06 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//001 DD UNIT=3330,[illegible]SP=(OLD,DELETE),
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.AQTRANS
//*
//* TEST 6 - CONVERT SAROAD INPUT TRANSACTIONS TO AQDHS-II TRANSACTIONS
//* AND SAVE CONVERTED TRANSACTIONS
//*
//*
//* CONVERT OLD FORMAT TRANSACTIONS TO NEW FORMAT TRANSACTIONS
//*
//TEST6A  EXEC AHQCNVRT,OUT=P
//CONVERT.INPUT  DD *
$2
2340001002A0687003010042603990740062
2340001002A068700401004260399074-999
2340001002A068700601004260399074-999
2340001002A0687007010042603990740068
2340001002A068730101004260399074-054
2340001002A0687302010042603990740053
2340001002A068730301004260399074-999
2340001002A0687304010042603990740085
2340001002A068730501004260399074-094
2340001002A0687306010042603990740071
2340001002A068730701004260399074-999
2340001002A0687308010042603990740052
2340001002A068730901004260399074-061
2340001002A0687310010042603990740094
2340001002A068731101004260399074-082
2340001002A0687312010042603990740074
2340001003A068700101004260399074-999
2340001003A068700301004260399074-037
2340001003A068700301004260399074-037
2340001003A068700501004260399074-999
2340001003A068700701004260399074-038
2340001003A0687301010042603990740038
2340001003A068730201004260399074-039
2340001003A068730401004260399074-040
2340001003A0687305010042603990740036
2340001003A068730601004260399074-041
2340001003A068730801004260399074-039
2340001003A0687309010042603990740037
2340001003A068731001004260399074-040
2340001003A0687311010042603990740036
2340001003A068731201004260399074-041
2340001004A068700201004260399074-999
2340001004A0687003010042603990740024
2340001004A068700401004260399074-999
2340001004A068700601004260399074-999
2340001004A0687007010042603990740022
2340001004A068730101004260399074-026
2340001004A0687302010042603990740025
2340001004A068730301004260399074-999
2340001004A0687304010042603990740023
2340001004A068730501004260399074-022
```

TEST06

```
2340001004A06873060100426039907400021
2340001004A068730701004260399074-999
2340001004A06873080100426039907400023
2340001004A068730901004260399074-024
2340001004A06873100100426039907400025
2340001004A068731101004260399074-026
2340001004A06873120100426039907400025
2340002001D05774080100441011501 1-196
2340002001D057740803004410115011-238
2340002001D057740805004410115011-999
2340002001D057740807004410115011-999
2340002001D0577408080044101150110564
2340002001D057740809004410115011-999
2340002001D0577408100044101150110302
2340002001D057740811004410115011-999
2340002001D057740813004410115011-999
2340002001D057740815004410115011-999
2340002001D057740817004410115011-999
2340002001D057740819004410115011-999
2340002001D0577408200044101150110817
2340002001D057740801004410183010-005
2340002001D057740803004410183010-005
2340002001D057740805004410183010-999
2340002001D057740807004410183010-999
2340002001D0577408080044101830100010
2340002001D057740809004410183010-999
2340002001D0577408100044101830100015
2340002001D057740811004410183010-999
2340002001D057740813004410183010-999
2340002001D057740815004410183010-999
2340002001D057740817004410183010-999
2340002001D057740819004410183010-999
2340002001D0577408200044101830100005
2340002003D057740801004410115011-038
2340002003D057740803004410115011-198
2340002003D057740805004410115011-999
2340002003D057740807004410115011-999
2340002003D0577408080044101150110463
2340002003D057740809004410115011-999
2340002003D0577408100044101150110634
2340002003D057740811004410115011-999
2340002003D057740813004410115011-999
2340002003D057740815004410115011-999
2340002003D057740817004410115011-999
2340002003D057740819004410115011-999
2340002003D0577408200044101150110197
2340002003D057740801004410183010-038
2340002003D057740801006120231281-013
2340002003D057740803004410183010-024
2340002003D057740805004410183010-999
220000100480377001030011201810920060
22000010048037700103006210122151-011
220000100480377001040011201810910007
220000100480377001050011201810910005
220000100480377001060011201810910008
220000100480377001070011201810910009
```

TEST06

```
220000100480377001080011201810910010
220000100480377001090011201810910012
220000100480377001100011201810910015
220000100480377001110011201810910010
220000100480377001120011201810910011
220000100480377001130011201810910012
22000010048037700114001120181091[illegible]
220000100480377001150011201810910016
220000100480377001160011201810910017
220000100480377001170011201810910017
220000100480377001180011201810910017
220000100480377001190011201810910018
220000100480377001200011201810910020
220000100480377001210011201810910021
220000100480377001220011201810910017
220000100480377001230011201810910016
220000100480377001240011201810910014
220000100480377001250011201810910010
220000100480377001260011201810910009
220000100480377001270011201810910006
220000100480377001280011201810910004
220000100480377001290011201810910008
220000100480377001300011201810910003
220000100480377002010011201810910002
220000100480377002030011201810910006
220000100480377002040011201810910007
220000100480377002050011201810910005
220000100480377002060011201810910008
220000100480377002070011201810910009
220000100480377002080011201810910010
220000100480377002090011201810910012
220000100480377002100011201810910015
220000100480377002110011201810910010
220000100480377002120011201810910011
220000100480377002130011201810910012
220000100480377002140011201810910013
220000100480377002150011201810910016
220000100480377002160011201810910017
220000100480377002170011201810910017
220000100480377002180011201810910017
220000100480377002190011201810910018
220000100480377002200011201810910020
220000100480377002210011201810910021
220000100480377002220011201810910017
220000100480377002230011201810910016
220000100480377002240011201810910014
220000100480377002250011201810910010
220000100480377002260011201810910009
220000100480377002270011201810910006
220000100480377002280011201810910004
220000100480377002290011201810910008
220000100480377002300011201810910003
220000100480377003010011201810910002
220000100480377003030011201810910006
220000100480377003040011201810910007
220000100480377003050011201810910005
```

```
TEST06
            220000100480377003060011201810910008
            220000100480377003070011201810910009
            220000100480377003080011201810910010
            220000100480377003090011201810910012
            220000100480377003100011201810910015
            220000100480377003110011201810910010
            220000100480377003120011201810910011
            220000100480377003130011201810910012
            220000100480377003140011201810910013
            220000100480377003150011201810910016
            220000100480377003160011201810910017
            220000100480377003170011201810910017
            220000100480377003180011201810910017
            220000100480377003190011201810910018
            220000100480377003200011201810910020
            220000100480377003210011201810910021
            220000100480377003220011201810910017
            220000100480377003230011201810910016
            220000100480377003240011201810910014
            220000100480377003250011201810910010
            220000100480377003260011201810910009
            220000100480377003270011201810910006
            220000100480377003280011201810910004
            220000100480377003290011201810910008
            220000100480377003300011201810910003
            220000100480377004010011201810910002
            220000100480377004030011201810910006
            220000100480377004040011201810910007
            220000100480377004050011201810910005
            220000100480377004060011201810910008
            220000100480377004070011201810910009
            220000100480377004080011201810910010
            220000100480377004090011201810910012
            220000100480377004100011201810910015
            220000100480377004110011201810910010
            220000100480377004120011201810910011
            220000100480377004130011201810910012
            220000100480377004140011201810910013
            220000100480377004150011201810910016
            220000100480377004160011201810910017
            220000100480377004170011201810910017
            220000100480377004180011201810910017
            220000100480377004190011201810910018
            220000100480377004200011201810910020
            220000100480377004210011201810910021
            220000100480377004220011201810910017
            220000100480377004230011201810910016
            220000100480377004240011201810910014
            220000100480377004250011201810910010
            220000100480377004260011201810910009
            220000100480377004270011201810910006
            220000100480377004280011201810910004
            220000100480377004290011201810910008
            220000100480377004300011201810910003
            220000100480377005010011201810910002
            220000100480377005030011201810910006
```

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TEST06
          220000100480377005040011201810910007
          220000100480377005050011201810910005
          220000100480377005060011201810910008
          220000100480377005070011201810910009
          220000100480377005080011201810910010
          220000100480377005090011201810910012
          220000100480377005100011201810910015
          220000100480377005110011201810910010
          220000100480377005120011201810910011
          220000100480377005130011201810910012
          220000100480377005140011201810910013
          220000100480377005150011201810910016
          220000100480377005160011201810910017
          220000100480377005170011201810910017
          220000100480377005180011201810910017
          220000100480377005190011201810910018
          220000100480377005200011201810910020
          220000100480377005210011201810910021
          220000100480377005220011201810910017
          220000100480377005230011201810910016
          220000100480377005240011201810910014
          220000100480377005250011201810910010
          220000100480377005260011201810910009
          220000100480377005270011201810910006
          220000100480377005280011201810910004
          220000100480377005290011201810910008
          220000100480377005300011201810910003
          220000100480377006010011201810910002
          220000100480377006030011201810910006
          220000100480377006040011201810910007
          220000100480377006050011201810910005
          220000100480377006060011201810910008
          220000100480377006070011201810910009
          220000100480377006080011201810910010
          22000010048037700608006120231281-022
          220000100480377006090011201810910012
          220000100480377006100011201810910015
          220000100480377006110011201810910010
          220000100480377006120011201810910011
          220000100480377006130011201810910012
          220000100480377006140011201810910013
          220000100480377006150011201810910016
          220000100480377006160011201810910017
          220000100480377006170011201810910017
          220000100480377006180011201810910017
          220000100480377006190011201810910018
          220000100480377006200011201810910020
          220000100480377006210011201810910021
          220000100480377006220011201810910017
          220000100480377006230011201810910016
          220000100480377006240011201810910014
          220000100480377006250011201810910010
          220000100480377006260011201810910009
          220000100480377006270011201810910006
          220000100480377006280011201810910004
          220000100480377006290011201810910008
```

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TEST06
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                  2200000100480377007010011201810910002
                  2200000100480377007030011201810910006
                  2200000100480377007040011201810910007
                  2200000100480377007050011201810910005
                  2200000100480377007060011201810910008
                  2200000100480377007070011201810910009
                  2200000100480377007080011201810910010
                  2200000100480377007090011201810910012
                  2200000100480377007100011201810910015
                  2200000100480377007110011201810910010
                  2200000100480377007120011201810910011
                  2200000100480377007130011201810910012
                  2200000100480377007140011201810910013
                  2200000100480377007150011201810910016
                  2200000100480377007160011201810910017
                  2200000100480377007170011201810910017
                  2200000100480377007180011201810910017
                  2200000100480377007190011201810910018
                  2200000100480377007200011201810910020
                  2200000100480377007210011201810910021
                  2200000100480377007220011201810910017
                  2200000100480377007230011201810910016
                  2200000100480377007240011201810910014
                  2200000100480377007250011201810910010
                  2200000100480377007260011201810910009
                  2200000100480377007270011201810910006
                  2200000100480377007280011201810910004
                  2200000100480377007290011201810910008
                  2200000100480377007300011201810910003
                  2200000100480377008010011201810910002
                  2200000100480377008030011201810910006
                  2200000100480377008040011201810910007
                  2200000100480377008050011201810910005
                  2200000100480377008060011201810910008
                  2200000100480377008070011201810910009
                  2200000100480377008080011201810910010
                  2200000100480377008090011201810910012
                  2200000100480377008100011201810910015
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                  2200000100480377008120011201810910011
                  2200000100480377008130011201810910012
                  2200000100480377008140011201810910013
                  2200000100480377008150011201810910016
                  2200000100480377008160011201810910017
                  2200000100480377008170011201810910017
                  2200000100480377008180011201810910017
                  2200000100480377008190011201810910018
                  2200000100480377008200011201810910020
                  2200000100480377008210011201810910021
                  2200000100480377008220011201810910017
                  2200000100480377008230011201810910016
                  2200000100480377008240011201810910014
                  2200000100480377008250011201810910010
                  2200000100480377008260011201810910009
                  2200000100480377008270011201810910006
```

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TEST06
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            220000100480377008290011201810910008
            220000100480377008300011201810910003
            220000100480377009010011201810910002
            220000100480377009030011201810910006
            220000100480377009040011201810910007
            220000100480377009050011201810910005
            220000100480377009060011201810910008
            220000100480377009070011201810910009
            220000100480377009080011201810910010
            220000100480377009090011201810910012
            220000100480377009100011201810910015
            220000100480377009110011201810910010
            220000100480377009120011201810910011
            220000100480377009130011201810910012
            220000100480377009140011201810910013
            220000100480377009150011201810910016
            220000100480377009160011201810910017
            220000100480377009170011201810910017
            220000100480377009180011201810910017
            220000100480377009190011201810910018
            220000100480377009200011201810910020
            220000100480377009210011201810910021
            220000100480377009220011201810910017
            220000100480377009230011201810910016
            220000100480377009240011201810910014
            220000100480377009250011201810910010
            220000100480377009260011201810910009
            220000100480377009270011201810910006
            220000100480377009280011201810910004
            220000100480377009290011201810910008
            220000100480377009300011201810910003
            220000100480377010010011201810910002
            220000100480377010030011201810910006
            220000100480377010040011201810910007
            220000100480377010050011201810910005
            220000100480377010060011201810910008
            220000100480377010070011201810910009
            220000100480377010080011201810910010
            220000100480377010090011201810910012
            220000100480377010100011201810910015
            220000100480377010110011201810910010
            220000100480377010120011201810910011
            220000100480377010130011201810910012
            220000100480377010140011201810910013
            220000100480377010150011201810910016
            220000100480377010160011201810910017
            220000100480377010170011201810910017
            220000100480377010180011201810910017
            220000100480377010190011201810910018
            220000100480377010200011201810910020
            220000100480377010210011201810910021
            220000100480377010220011201810910017
            220000100480377010230011201810910016
            220000100480377010240011201810910014
            220000100480377010250011201810910010
```

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TEST06
220000100480377010260011201810910009
220000100480377010270011201810910006
22000010048037701028001120.810910004
220000100480377010290011201810910008
220000100480377010300011201810910003
220000100480377011010011201810910002
220000100480377011030011201810910006
220000100480377011040011201810910007
220000100480377011050011201810910005
220000100480377011060011201810910008
220000100480377011070011201810910009
220000100480377011080011201810910010
220000100480377011090011201810910012
220000100480377011100011201810910015
220000100480377011110011201810910010
220000100480377011120011201810910011
220000100480377011130011201810910012
22000010048037701113006210122151-012
220000100480377011140011201810910013
220000100480377011150011201810910016
220000100480377011160011201810910017
220000100480377011170011201810910017
220000100480377011180011201810910017
220000100480377011190011201810910018
220000100480377011200011201810910020
220000100480377011210011201810910021
220000100480377011220011201810910017
220000100480377011230011201810910016
220000100480377011240011201810910014
220000100480377011250011201810910010
220000100480377011260011201810910009
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220000100480377011280011201810910004
220000100480377011290011201810910008
220000100480377011300011201810910003
220000100480377012010011201810910002
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220000100480377012040011201810910007
220000100480377012050011201810910005
220000100480377012060011201810910008
220000100480377012070011201810910009
220000100480377012080011201810910010
220000100480377012090011201810910012
220000100480377012100011201810910015
220000100480377012110011201810910010
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220000100480377012180011201810910017
220000100480377012190011201810910018
220000100480377012200011201810910020
220000100480377012210011201810910021
22000010048037701221006210122151-005
```

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TESTD6
              220000100480377012220011201810910017
              220000100480377012230011201810910016
              220000100480377012240011201810910014
              220000100480377012250011201810910010
              220000100480377012260011201810910009
              220000100480377012270011201810910006
              220000100480377012280011201810910004
              220000100480377012290011201810910008
              220000100480377012300011201810910003
              //CONVERT.OUTPUT  DD UNIT=3330,VOL=SER=CDHSPK,
              //             DISP=(NEW,CATLG,DELETE),
              //             SPACE=(TRK,(10,5),RLSE),
              //             DSN=CN.EPALMH.A087.AQTRANS
              //CONVERT.AQSOPTIN DD *
              NOLIST
              //
```

```
TEST07
//EPALMH07 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
//KILLL EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
//  VOL=SER=CDMSPK,
//  DSN=CN.EPALMH.A087.CDMS.HQ.AQS.DATA.AQ1029V3
//TEST7A  EXEC AMUFUPDT,
//      R1=100K,
//      PROJECT='CN.EPALMH.A087.CDMS.HQ.AQS',
//      OLDMSTR=AQ102976,
//      NEWMSTR=AQ1029V3
//*
//* UPDATE MASTER FILE USING CONVERTED TRANSACTIONS
//*
//EDIT.OPTIONS DD *
LIST FLAGS
//EDIT.INPUT  DD  *
1340001003A06175051300611012013100200000000500100011000900070011                2
1340001003A06175051308611012013100010012000800050004000400030003                2
1340001003A06175051316611012013100030002000200010001000200010000                2
1340003010G0417508220061101231210002    000100060005000400030003                2
1340003010G04175082208611012312100030002000500030004000300000001                2
1340003010G04175082216611012312100020002000300040003000200030002                2
1120001003C01174061000611022114000010002000400030002000300020001                2
1120001003C01174061008611022114000020001000300000002000400020004                2
1120001003C01174061016611022114000050003000200010002000200030004                2
1120001003C01173091200611025014000050006000400030003000200050003                2
1120001003C01173091208611025014000030004000300040003000300030002                2
1120001003C01173091216611025014000030002000400030003000200040003                2
1120001001C01174102000611032313100040003000400030002000300030002                2
1120001001C0117410200861103231310004000300030002000200010000                    2
1120001001C011741020166110323131    0002000300040004000500050006                2
1340002001D05173100500611042114100030004000300020004000500030002                2
1340002001D05173100508611042114100040003000200040003000400030002                2
1340002001D0517310051661104211410003    000200010000000200030002                2
1340002001D05174120800611062014100060004000400030005000400030004                2
1340002001D05174120808611062014100040003000300030002000300030002                2
1340002001D05174120816611062014100030004000300030002000100020002                2
1100001001E021740708006110120131-931-943-995-401-380-350-330-323                2
1100001001E021740708006120231281-931-943-995-401-380-350-330-323                2
1100001001E021740708086120231281-291    005200880089010301270169                2
1100001001E021740708086110131281-291    005200880089010301270169                2
1100001001E0217407081661202312810388    017702020191020902150206                2
1370001234F051740115006110123130-006-007-008-008-009-011-012-013
1370001234F051740115006210122150-006-007-008-008-009-011-012-013                2
1370001234F051740115086210122150-011-009    -0030000000200030003                2
1370001234F051740115086110221140-011-009    -0030000000200030003                2
1370001234F05174011516621012215000040009000600070007000800090010                2
1370001234F0517408010062101221500063006300620061006000600062                    2
1370001234F05174080108621012215000630067    00740075007700800079                2
1370001234F051740801166210122150007700740073    0069006800670066                2
1340002003D051751105006210322170-001-001-001-001-001-0010000                    2
1340002003D051751105006110250140-001-001-001-001-001-0010000                    2
1340002003D051751105086210322170-0010000    00000001000100020001                2
1340002003D05175110516621032217000010001000000000000000000000000                2
1340002003D05174042508622012019100450044    004800490045    0038                2
1340002003D05174042516622012019100370036003300300026002600250024                2
```

```
TEST07
           1120001003C01173121300633011225200030003000200020003000200030008               2
           1120001003C01173121308633011225200100012001300150022002300220029               2
           112000100 3C011731213166330112252000    001300100009000700050003               2
           1340001003A06175051800641011122200150016001400130012001100100002               2
           1340001003A061750518086410111222000800 10    00120013001400170018               2
           13400010 03A06175051816641011122    001500140012    000900130012               2
           1340001003A0617410040065303816920005000400030004    000400050003               2
           1340001003A0617410040865303816920004000600050007 0008    00100012               2
           1340001003A06174100416653038169200130012001200090007000600040003               2
           //UPDATE.INPUT DD *
           LIST FLAGA
           //TEST78  EXEC AMQELIST,
           //      REGION.REPORT=150K,
           //      MSTRFIL=A31029V3
           //*
           //* PRODUCE DETAIL LIST OF MASTER FILE
           //
```

```
TEST08
           //EPALMH08 JOB (A087,LMH,,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
           //KILL  EXEC PGM=IEFBR14
           //DEL  DD UNIT=3330,DISP=(OLD,DELETE),
           //  VOL=SER=CDHSPK,
           //  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ1029V2
           //*
           //* TEST 8 -UPDATE MASTER FILE USING NEW FORMAT TRANSACTIONS
           //*
           //TEST8A  EXEC AHQFUPDT,
           //      PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
           //      OUT=P,
           //      R1=100K,
           //      NEWMSTR=AQ1029V2,
           //      OLDMSTR=AQ1029V3
           //EDIT.AQSUPTIN  DD *
                LIST,FLAGN
           //EDIT.AQSTRANS  DD *
           1340001001A062740225001120181091                                               1
           1340001003A061750513006110120131002000000000500100011000900070011              2
           1340001003A06175051308611012013100010012000800050004000400030003               2
           1340001003A06175051316611012013100030002000200010001000200010000               2
           1340003010G0417508220061101231210002     000100060005000400030003              2
           1340003010G04175082208611012312100030002000500030004000300000001               2
           337F05811101910107101140000012340066                                           2
           337F05811101910107101180000012340067                                           2
           337F05811101910107101210000012340040                                           2
           1340003010G04175082216611012312100020002000300040003000200030002               2
           1120001003C01174061000611022114000010002000400030002000300020001               2
           1120001003C01174061008611022114000020001000300000002000400020004               2
           1120001003C01174061016611022114000050003000200010002000200030004               2
           1120001003C01173091200611025014000050006000400030003000200050003               2
           1120001003C01173091208611025014000030004000300040003000300030002               2
           1120001003C01173091216611025014000030002000400030003000200040003               2
           337F05811101910107101250000012340045                                           2
           337F05811101910107101280000012340052                                           2
           337F05811101910107102010000012340101                                           2
           1120001001C01174102000611032313100040003000400030002000300030002               2
           1120001001C0117410200861103231310004000300030002000200010000                   2
           1120001001C011741020166110323131     0002000300040004000500050006              2
           1340002001D05173100500611042114100030004000300020004000500030002               2
           1340002001D05173100508611042114100040003000200040003000400030002               2
           1340002001D0517310051661104211410003     000200010000000200030002              2
           1340002001D05174120800611062014100060004000400030005000400030004               2
           1340002001D05174120808611062014100040003000300030002000300030002               2
           1340002001D05174120816611062014100030004000300030002000100020002               2
           1100001001E021740708006110120131-931-943-995-401-380-350-330-323               2
           1100001001E021740708006120231281-931-943-995-401-380-350-330-323               2
           1100001001E021740708086120231281-291     005200880089010301270169              2
           1100001001E021740708086110131281-291     005200880089010301270169              2
           337F05811101910107102030000012340060                                           2
           337F05811101910107102110000012340040                                           2
           337F05811101910107102150000012340099                                           2
           337F05811101910107102180000012340051                                           2
           337F05811101910107103090000012340051                                           2
           1100001001E0217407081661202312810388     017702020191020902150208              2
           1370001234F051740115006110123130-006-007-008-008-009-011-012-013
```

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TESTOR
           1370001234F051740115006210122150-006-007-008-008-009-011-012-013               2
           337F05811101910107103160000012340080                                           2
           337F05811101910107103170000012340062                                           2
           1370001234F051740115086210122150-011-009    -00300000000200030003               2
           1370001234F051740115086110221140-011-009    -00300000000200030003               2
           1370001234F051740115166210122150000400040006000700070008000900010               2
           1370001234F05174080100621012215000630063006200610060    00600062               2
           1370001234F051740801086210122150006300067    00740075007700800079               2
           1370001234F051740801166210122150007700740073    0069006800670066               2
           1340002003D051751105006210322170-001-001-001-001-001-0010000                   2
           1340002003D051751105006110250140-001-001-001-001-001-0010000                   2
           1340002003D051751105086210322170-0010000    00000001000100020001               2
           1340002003D05175110516621032217000010001000000000000000000000000               2
           1340002003D05174042508622012019100450044    004800470045    0038               2
           337F05811101910107103230000012340063                                           2
           337F05811101910107103260000012340070                                           2
           1340002003D05174042516622012019100370036003300300026002600250024               2
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           1120001003C01173121308633011225200100012001300150022002300220020               2
           1120001003C0117312131663301122520000    001300100009000700050003               2
           1340001003A06175051800641011122200150016001400130012001100100002               2
           1340001003A06175051808641011122200080010    00120013001400170018               2
           1340001003A061750518166410111222    001500140012    000900130012               2
           1340001003A061741004006530381692000500040003000 4    000400050003               2
           1340001003A0617410040865303816920004000600050007000 8    00100012               2
           1340001003A06174100416653038169200130012001200090007000600040003               2
           337F05811101910107101110000012340081
           2340003002G049740908004350192073001643101110200248                             2
           2340003004G049740901004350192073000343101110200132                             2
           337F05811101910107103300000012340103                                           2
           337F05811101910107104010000012340060                                           2
           2340003004G049740908004350192073000243101110200068                             2
           2340003004G049740915004350192073000143101110200084                             2
           2340003004G049740922004350192073000043101110200126                             2
           2340003004G049740929004350192073000343101110200104                             2
           337F05811101910107104050000012340070                                           2
           337F05811101910107104060000012340177                                           2
           2340003006G049740901004350192073001243101110200144                             2
           2340003006G049740908004350192073001143101110200150                             2
           2340003006G049740915004350192073001043101110200140                             2
           2340003006G049740922004350192073001343101110200146                             2
           337F05811101910107104080000012340038                                           2
           2340003006G049740929004350192073001543101110200145                             2
           334A06A42603990747301010000010010027000001002005400000100300380000010040026    2
           334A06A42603990747302010000010010028000001002005300000100300390000010040025    2
           334A06A42603990747003010000010010038000001002006200000100300370000010040024    2
           337F05811101910107104160000012340083                                           2
           334A06A42603990747304010000010010046000001002008500000100300400000010040023    2
           334A06A42603990747305010000010010029000001002009400000100300360000010040022    2
           334A06A42603990747306010000010010036000001002007100000100300410000010040021    2
           334A06A42603990747007010000010010042000001002006800000100300380000010040022    2
           337F05811101910107104230000012340051                                           2
           337F05811101910107104270000012340040                                           2
           334A06A42603990747308010000010010059000001002005200000100300390000010040023    2
           334A06A42603990747309010000010010083000001002006100000100300370000010040024    2
           334A06A42603990747310010000010010072000001002009400000100300400000010040025    2
```

TEST09

```
334A06A42603990747311010000010010064000001002008200000100300360000010040026      2
337F0581110191010710504000001234016B                                             2
337F05811101910107105080000012340038                                             2
334406A42603990747312010000010010027000001002007400000100300410000010040025      2
334A06B435019202170010100001001005500000100211000000010030098000001004005425     2
334A06B435019202170040100001001005560000100211101000100300909900010040 05453     2
334A06B43501920217007010000100100566000010021112600010030090970001004005452      2
334A06B43501920217010010000100100578000010021111800010030091000001004005451      2
334A06B43501920217101010000100100593000010021113600010030090960001004005450      2
334A06B43501920217104010000100100558000010021110400010030091010001004005449      2
337F058111019101071051100000012340076                                            2
337F058111019101071051400000012340042                                            2
334406B43501920217107010000100100564000010021110500010030090980001004005450      2
334A06B43501920217110010000100100572000010021112200010030090990001004005451      2
334A06B43501920217201010000100100583000010021111900010030090970001004005452      2
334A06B43501920217204010000100100587000010021112800010030091000001004005453      2
337F058111019101071051700000012340077                                            2
337F05811101910107105210000001234004B                                            2
334A06B43501920217207010000100100598000010021113200010030090960001004005454      2
334A06B43501920217210010000100100559000010021110100010030091010001004005453      2
2340003002G04C7101911843502910110005                                             2
2340003002G04C7102911843502910110008                                             2
2340003002G04C7103911843502910110013                                             2
2340003002G04C7104911843502910110021                                             2
2340003002G04C7201911843502910110034                                             2
337F058111019101071052400000012340073                                            2
2340003002G04C7203911843502910110039                                             2
2340003002G04C7204911843502910110044                                             2
337F058111019101071052800000012340113                                            2
2340003002G04C7301911843502910110033                                             2
2340003002G04C7302911843502910110027                                             2
2340003002G04C7303911843502910110010                                             2
2340003002G04C7304911843502910110037                                             2
1340001001A06174010100111019101000010001000200030005000800030021                 2
1340001001A06174010116111019101000010001000200030005000800030021                 2
1340001001A06174010300111019101000020002000400060010001600260042                 2
337F058111019101071060500000012340054                                            2
1340001001A06174010416111019101000030003000600090015002400390013                 2
1340001001A06174010608111019101000050005001000150025004000150005                 2
1340001001A06174010800111019101000080008001600240040001400040018                 2
1340001001A06174011008111019101000130013002600390015000400190023                 2
1340001001A06174011016111019101000210021004200130005001800230041                 2
1340001001A06174012000111019101000330033001800020020002200420014                 2
337F058111019101071061400000012340037                                            2
1340001001A06174012008111019101000040004001000150025004000150005                 2
1340001001A06174012016111019101000370037002800170045001200070019                 2
1340001001A06174013108111019101000410041003800320020000200220024                 2
1340001001A06274020101112018109100010001000200030005000800030021                 2
1340001001A06274020117112018109100010001000200030005000800030021                 2
1340001001A06274020401112018109100020002000400060010001600260042                 2
1340001001A06274020617112018109100030003000600090015002400390013                 2
1340001001A06274020801112018109100050005001000150025004000150005                 2
1340001001A06274021201112018109100080008001600240040001400040018                 2
1340001001A06274021617112018109100130013002600390015000400190023                 2
1340001001A06274021801112018109100210021004200130005001800230041                 2
1340001001A06274022317112018109100330033001800020020002200420014                 2
```

TEST08

```
1340001001A06274022517112018109100040004001000150025004000150005               2
1340001001A06274022801112018109100370037002800170045001200070019               2
1340001001A06274023017112018109100410041003800320020000200220024               2
1340001001A06374030102211017190200010001000200030005000800030021               2
1340001001A06374030302211017190200010001000200030005000800030021               2
1340001001A06374030602211017190200020002000400060010001600260042               2
1340001001A06374031002211017190200030003000600090015002400390013               2
1340001001A06374031202211017190200050005001000150025004000150005               2
1340001001A06374031302211017190200080008001600240040001400040018               2
1340001001A06374031402211017190200130013002600390015000400190023               2
1340001001A06374031502211017190200210021004200130005001800230041               2
1340001001A06374031802211017190200330033001800020020002200420014               2
1340001001A06374032202211017190200040004001000150025004000150005               2
1340001001A06374032302211017190200370037002800170045001200070019               2
1340001001A06374032602211017190200410041003800320020000200220024               2
1340001001A064740401034210111053000100010002000300050008                       2
337F058111019101071061800000012340052                                          2
1340001001A064740402034210111053000100010002000300050008                       2
1340001001A064740403034210111053000200020004000600100016                       2
1340001001A064740404034210111053000300030006000900150024                       2
1340001001A064740408034210111053000500050010001500250040                       2
1340001001A064740410034210111053000800080016002400400014                       2
1340001001A064740418034210111053001300130026003900150004                       2
1340001001A064740419034210111053002100210042001300050018                       2
1340001001A064740420034210111053003300330018000200200022                       2
1340001001A064740423034210111053000400040010001500250040                       2
1340001001A064740426034210111053003700370028001700450012                       2
1340001001A064740427034210111053004100410038003200200002                       2
1340001001A0657405010442102910540001000100020003                               2
337F058111019101071062100000012340071                                          2
337F058111019101071062600000012340068                                          2
1340001001A0657405100442102910540001000100020003                               2
1340001001A0657405110442102910540002000200040006                               2
1340001001A0657405120442102910540003000300060009                               2
1340001001A0657405130442102910540005000500100015                               2
1340001001A0657405180442102910540008000800160024                               2
1340001001A0657405190442102910540013001300260039                               2
1340001001A0657405200442102910542100210042001300                               2
1340001001A0657405210442102910540033003300180002                               2
337F058111019101071062900000012340045                                          2
337F058111019101071070500000012340090                                          2
337F058111019101071070700000012340062                                          2
1340001001A0657405220442102910540004000400100015                               2
1340001001A0657405260442102910540037003700280017                               2
1340001001A0657405300442102910540041004100380032                               2
1340001001A066740601054240133021000100010002                                   2
1340001001A066740602054240133021000100010002                                   2
1340001001A066740603054240133021000200020004                                   2
1340001001A066740604054240133021000300030006                                   2
337F058111019101071070900000012340059                                          2
337F058111019101071071700000012340077                                          2
337F058111019101071072000000012340089                                          2
337F058111019101071072200000012340031                                          2
337F058111019101071072400000012340030                                          2
1340001001A066740605054240133021000500050010                                   2
1340001001A066740606054240133021000800080016                                   2
```

```
TEST08
           1340001001A066740607054240133021001300130026                         2
           1340001001A066740608054240133021002100210042                         2
           1340001001A066740624054240133021003300330018                         2
           1340001001A066740626054240133021000400040010                         2
           1340001001A066740628054240133021003700370028                         2
           337F05811101910107107270000012340052                                 2
           337F05811101910107107290000012340038                                 2
           337F05811101910107107310000012340057                                 2
           337F05811101910107108030000012340044                                 2
           337F05811101910107108050000012340046                                 2
           337F05811101910107108070000012340031                                 2
           337F05811101910107108100000012340072                                 2
           337F05811101910107108120000012340039                                 2
           337F05811101910107108140000012340022                                 2
           337F05811101910107108170000012340089                                 2
           337F05811101910107108190000012340095                                 2
           337F05811101910107108210000012340056                                 2
           337F05811101910107108240000012340048                                 2
           337F05811101910107108260000012340063                                 2
           337F05811101910107108280000012340066                                 2
           337F05811101910107108310000012340087                                 2
           337F05811101910107109020000012340056                                 2
           337F05811101910107109040000012340050                                 2
           1340001001A066740630054240133021004100410038                         2
           1340001001A06774070106426028207200010001                             2
           1340001001A06774070306426028207200010001                             2
           1340001001A06774070506426028207200020002                             2
           1340001001A06774070706426028207200030003                             2
           1340001001A06774071406426028207200050005                             2
           1340001001A06774072006426028207200080008                             2
           1340001001A06774072206426028207200130013                             2
           1340001001A06774072406426028207200210021                             2
           1340001001A06774072606426028207200330033                             2
           1340001001A06774072806426028207200040004                             2
           1340001001A06774073006426028207200370037                             2
           1340001001A06774073106426028207200410041                             2
           337F05811101910107109070000012340057                                 2
           337F05811101910107109090000012340059                                 2
           337F05811101910107109140000012340074                                 2
           337F05811101910107109160000012340044                                 2
           337F05811101910107109180000012340007                                 2
           337F05811101910107109210000012340034                                 2
           337F05811101910107109230000012340035                                 2
           337F05811101910107109250000012340019                                 2
           337F05811101910107109280000012340034                                 2
           337F05811101910107109300000012340039                                 2
           337F05811101910107110020000012340017                                 2
           337F05811101910107110050000012340070                                 2
           337F05811101910107110070000012340052                                 2
           337F05811101910107110090000012340054                                 2
           337F05811101910107110120000012340043                                 2
           337F05811101910107110140000012340050                                 2
           337F05811101910107110160000012340020                                 2
           337F05811101910107110190000012340011                                 2
           337F05811101910107110210000012340035                                 2
           337F05811101910107110230000012340037                                 2
```

```
TESTO8
                337F0581110191010711026000000123400037                                        2
                337F0581110191010711028000000123400023                                        2
                337F0581110191010711030000000123400032                                        2
                337F0581110191010711102000000123400035                                        2
                337F0581110191010711104000000123400034                                        2
                337F0581110191010711106000000123400037                                        2
                337F0581110191010711109000000123400038                                        2
                337F0581110191010711130000000123400024                                        2
                337F0581110191010711202000000123400025                                        2
                337F0581110191010711207000000123400015                                        2
                337F0581110191010711214000000123400025                                        2
                2340002001D058740801004410183010000544101150110196                            2
                2340002001D058740803004410183010000544101150110238                            2
                2340002001D058740808004410183010001044101150110564                            2
                2340002001D058740810004410183010001544101150110302                            2
                2340002001D058740820004410183010000544101150110817                            2
                2340002003D0587408010044101830100038441011501 1                               2
                2340002003D058740803004410183010002844101150110198                            2
                2340002003D058740808004410183010001744101150110463                            2
                2340002003D058740810004410183010006544101150110634                            2
                2340002003D058740820004410183010000944101150110197                            2
                2340002005D058740801004410183010000444101150110195                            2
                2340002005D058740803004410183010000344101150110159                            2
                2340003002G004974090100435019207300044310111 0200133                          2
                //
```

TEST09

```
//EPALMH09 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ1029C6
//*
//* TEST 9  - UPDATE MASTER FILE USING NEW FORMAT TRANSACTIONS
//*
//TEST9A  EXEC AHQFUPDT,
//              PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//              OUT=P,
//              R1=100K,
//              OLDMSTR=AQ1029V2,
//              NEWMSTR=AQ1029C6
//EDIT.OPTIONS DD *
NOFLAGW
//EDIT.INPUT DD *
2340003002G04C71019128435029101 1  47                                            2
2340003002G04C710291284350291011  34                                            2
2340003002G04C710391284350291011  31                                            2
2340003002G04C710491284350291011   5                                            2
2340003002G04C7201912843502910110046                                            2
2340003002G04C7202912843502910110011                                            2
2340003002G04C7203912843502910110007                                            2
2340003002G04C7204912843502910110018                                            2
2340003002G04C7301912843502910110025                                            2
2340003002G04C7302912843502910110043                                            2
2340003002G04C7303912843502910110018                                            2
2340003002G04C7304912843502910110011                                            2
2340003002G04C7403912861202312 81-725                                           2
2340003002G04C740391286210122151-030                                            2
//UPDATE.INPUT DD *
NOLIST FLAGW
//TEST9B  EXEC AHQELIST,
//              OUT=P,
//              REGION.REPORT=130K,
//              MSTRFIL=AQ1029C6
//*
//* PRODUCE DETAIL LIST OF MASTER FILE
//*
//REPORT.INPUT  DD *
DISPLAY V > 50
//
```

```
TEST10
          //EPALMH10 JOB (A087.LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
          //*
          //KILL  EXEC PGM=IEFBR14
          //DD1 DD UNIT=3330,DISP=(OLD,DELETE),
          //  VOL=SER=CDHSPK,
          //  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ1029C2
          //* TEST 10 - UPDATE MASTER FILE USING NEW FORMAT TRANSACTIONS
          //* COMPOSITE DATA
          //*
          //TEST10  EXEC AHQFUPDT,
          //              OUT=P,
          //              R1=100K,
          //              PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
          //              OLDMSTR=AQ1029C6,
          //              NEWMSTR=AQ1029C2
          //EDIT.OPTIONS DD *
          LIST FLAGW
          //EDIT.INPUT DD *
          234000300 2G04C730130384350291011 0029                                            2
          2340003002G04C730230384350291011 0040                                            2
          2340003002G04C730330384350291011 0019                                            2
          2340003002G04C730430384350291011 0009                                            2
          2340003002G04C730530384350291011 0028                                            2
          2340003002G04C730630384350291011 0037                                            2
          2340003002G04C730730384350291011 0015                                            2
          2340003002G04C730830384350291011 0002                                            2
          2340003002G04C730930384350291011 0017                                            2
          2340003002G04C731030384350291011 0019                                            2
          2340003002G04C73103038621032217 1-003                                            2
          2340003002G04C731130384350291011 0036                                            2
          2340003002G04C731230384350291011 0005                                            2
          2340003002G04C73123038621032217 1-010                                            2
          //UPDATE.INPUT DD *
          LIST
          //
```

TEST11

```
//EPALMH11 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//*
//*    TEST 11      EDIT COMPOSITE DATA
//*    USE TRANSACTION EDIT TO EDIT COMPOSITE DATA
//*
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
//  VOL=SER=CDMSPK,
//  DSN=CN.EPALMH.A087.CDMS.HQ.AQS.DATA.TRANS
//TEST11   EXEC AMQTEDIT,
//               REGION.EDIT=90K,
//               OUT=P,
//               PROJECT='CN.EPALMH.A087.CDMS.HQ.AQS',
//               DISP='NEW,CATLG,DELETE'
//EDIT.OPTIONS DD *
FLAGM
//EDIT.INPUT DD *
2340003002G04C7301074843502910110041                                         2
2340003002G04C7302074843502910110046                                         2
2340003002G04C7303074843502910110037                                         2
2340003002G04C730307486120231281-0135                                        2
2340003002G04C7304074843502910110033                                         2
2340003002G04C7305074843502910110020                                         2
2340003002G04C7306074843502910110003                                         2
2340003002G04C7307074843502910110023                                         2
2340003002G04C7308074843502910110026                                         2
2340003002G04C7309074843502910110049                                         2
2340003002G04C7310074843502910110025                                         2
2340003002G04C7311074843502910110024                                         2
2340003002G04C7312074843502910110049                                         2
2340003002G04C6000525943502910110023                                         2
2340003002G04C6100525943502910110022                                         2
2340003002G04C6200525943502910110045                                         2
2340003002G04C6300525943502910110017                                         2
2340003002G04C6400525943502910110012                                         2
2340003002G04C6500525943502910110029                                         2
2340003002G04C6600525943502910110041                                         2
2340003002G04C6700525943502910110020                                         2
2340003002G04C6800525943502910110011                                         2
2340003002G04C6900525943502910110031                                         2
234000300 2G04C690052596120231281-0030                                       2
2340003002G04C7000525943502910110002                                         2
2340003002G04C7100525943502910110023                                         2
//
```

TEST12

```
//EPALMH12 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
//  VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ1019CC
//*
//* TEST 12   UPDATE MASTER FILE USING TRANSACTIONS EDITED IN TEST 11
//*
//TEST12 EXEC  AHQMFUPD,
//             OUT=P,
//             PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//             OLDMSTR=AQ1029C2,
//             NEWMSTR=AQ1019CC
//UPDATE.INPUT DD *
NOLIST FLAGW
//
```

TEST13

```
//EPALMH13 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.FTMSTRAE
//DD2 DD UNIT=3330,DISP=(OLD,DELETE),VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ102076
//*
//* TEST 13 - SUBMIT DATA TO SAROAD
//*
//TEST13  EXEC AHQACNVT,
//              OUT=P,
//              OLDMSTR=AQ1019CC,
//              NEWMSTR=AQ102076
//*
//* SUBMIT PREVIOUSLY UNSUBMITTED READINGS TU SAROAD
//*
//SUBMIT.ADDFILE  DD SYSOUT=P
//SUBMIT.CHNGEFL  DD SYSOUT=P
//TEST13A  EXEC AHQACNVT,
//              OUT=P,
//              OLDMSTR=AQ102076,
//              NEWMSTR=FTMSTRAE,
//              DISP='NEW,DELETE'
//*
//* SHOW THAT ALL READINGS HAVE BEEN SUBMITTED
//*
//SUBMIT.ADDFILE  DD SYSOUT=P
//SUBMIT.CHNGEFL  DD SYSOUT=P
```

TEST14

```
//EPALMH14 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),VOL=SER=CDHSPK,
//  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.TSPG72
//*
//* TEST 14  RETRIEVE ON YEAR >= 1972 AND PARM CODE OF 11101 (TSP) AND SAVE FILE
//*
//TEST14  EXEC AHQRETVR,
//              OUT=P,
//              MSTRFIL=A0102076,
//              PRIMARY=15,
//              ANSWRFL=TSPG72,
//              DISP='NEW,CATLG,DELETE'
//COMPILE.INPUT  DD *
$$SELECT
PARAMETER-CODE            = '11101'                              AND
YEAR                    N < '72'
$$END
//
```

TEST15

```
//EPALMH15 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//*  TEST 15    -  DATA ANALYSES OF FILE CREATED IN TEST 14                        00000020
//*                                                                                00000030
//TEST15A EXEC AHQMSENT,
//              OUT=P,
//              PRIMARY=05,
//              MSTRFIL=TSPG72,
//              STATFIL=STAT15                                                     00000060
//TEST15B EXEC AHQDANAL,
//              OUT=P,
//              PRIMARY=05,
//              MSTRFIL=STAT15,                                                    00000080
//              STATFIL=STAT15B                                                    00000090
//TEST15C EXEC AHQSLIST,
//              OUT=P,
//              STATFIL=STAT15B                                                    00000110
```

TEST16

```
//EPALMH16 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//*                                                                       00000030
//* TEST 16 -SLIDING AVERAGE OF TSP DATA CURRENT TO 1972 OR LATER
//*  RERUNS TEST 14 RETRIEVAL EXCEPT IN SLIDING AVERAGE MODE AND
//*  OBTAINS SLIDING AVERAGE
//*                                                                       00000050
//TEST16A EXEC AHQRETVR,
//             OUT=P,
//             PRIMARY=05,
//             MSTRFIL=AQ102076,
//             ANSWRFL=TSPG729A
//COMPILE.INPUT  DD *
$$SELECT                SLIDING
PARAMETER-CODE            = '11101'                                 AND
YEAR                    N < '72'
$$END
//TEST16B EXEC AHQIAVGS,
//             OUT=P,
//             PRIMARY=05,
//             MSTRFIL=TSPG729A,
//             ANSWRFL=ITSLDA16
//AVERAGE.INPUT DD *
AVERAGE 24
//TEST16C EXEC AHQELIST,
//             OUT=P,
//             REGION.REPORT=130K,
//             MSTRFIL=ITSLDA16
```

```
TEST17
          //EPALMH17 JOB (A087,L,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
          //KILL  EXEC PGM=IEFBR14
          //DD1 DD UNIT=3330,DISP=(OLD,DELETE),VOL=SER=CDHSPK,
          //  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.S02G72
          //*
          //* TEST 17  RETRIEVE ON YEAR >= 1972 AND PARM CODE OF 42401 AND SAVE FILE
          //*
          //TEST17  EXEC AHQRETVR.
          //              OUT=P,
          //              MSTRFIL=AQ102076,
          //              PRIMARY=01,
          //              ANSWRFL=S02G72,
          //              DISP='NEW,CATLG,DELETE'
          //              DISP='NEW,CATLG,DELETE'
          //COMPILE.INPUT  DD *
          $$SELECT                                                            AND
          PARAMETER-CODE           = '42401'
          YEAR                   N < '72'
          $$END
          //
```

TEST18

```
//EPALMH18 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//*
//* TEST 18  DETAIL LIST OF TSP DATA RETRIEVED IN TEST 14
//*
//TEST18   EXEC AHQELIST,
//      OUT=P,
//      REGION.REPORT=130K,
//      MSTRFIL=TSPG72
//REPORT.INPUT  DD *
DISPLAY > 25
//
```

```
TEST19
          //EPALMH19 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
          //KILL    EXEC PGM=IEFBR14,REGION=4K
          //C DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTPRM2AB,UNIT=3330,
          //  VOL=SER=CDHSPK,DISP=(OLD,DELETE)
          //D DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTPRM1AB,UNIT=3330,
          //  VOL=SER=CDHSPK,DISP=(OLD,DELETE)
          //E DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.NTPRM1AB,UNIT=3330,
          //  VOL=SER=CDHSPK,DISP=(OLD,DELETE)
          //*
          //* TEST 19 - UPDATE PARM-CODE TABLE
          //*
          //TEST19A EXEC AHQHUPD1,
          //              OUT=P,
          //              PRIMRY1=05,
          //              PRIMRY2=05
          //*
          //* UPDATE VALID PARM, METHOD UNIT TABLE
          //*
          //SORT.INPUT  DD *
          142401170700042SULFUR DIOXIDE                 INSTRUMENTAL                00000100
          242401170700042POLAROGRAPHIC DYNA SCI.  PARTS PER MILLION (VOL/VOL)       00000200
          142602150107521                                                           00000300
          242602150107521                                                           00000400
          111104910100021POLNUCLEAR HYDROCARBONS        HI-VOL                      00000500
          211104910100021PIPERONYL CHLORIDE       U-GMS/M3 (25DEG C,1013 M-BARS)    00000600
          //TEST19B EXEC AHQNSENT,
          //              OUT=P,
          //              PRIMARY=05,
          //              PARMKFL=HTPRM1AB,
          //              PARMFFL=NTPRM1AB,
          //              DISP='NEW,CATLG,DELETE'
          //*
          //* APPEND SENTINEL RECORD FOR USE BY DATA ANALYSIS
          //*
          //TEST19C EXEC AHQPMETH,
          //              KEYFIL=HTPRM1AB,
          //              OUT=P,
          //              DESCFIL=HTPRM2AB
```

TEST20

```
//EPALMH20 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL EXEC PGM=IEFBR14,REGION=4K
//D DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTSITEAB,DISP=(OLD,DELETE),
//  VOL=SER=CDHSPK,UNIT=3330
//*
//* TEST 20  UPDATE SITE-CODE TABLE
//*
//TEST20A EXEC AHQHUPD2,OUT=P
//*
//* UPDATE VALID SITE CODE TABLE
//*
//SORT.INPUT  DD  *
212346209J05STATE = 21 (MARYLAND)  AREA CODE = 2346  SITE CODE = 209..  00000100
200001004B03STATE = 20 (MAINE)  AREA-CODE = 0001  SITE-CODE = 004.....  00000200
340003010G04                                                            00000300
//TEST20B EXEC AHQPSITE,
//             OUT=P,
//             SITEFIL=HTSITEAB
//
```

TEST21

```
//EPALMH21 JOB (A087,LMH,,LMH,1,1),TIME=1,PRTY=5,MSGCLASS=P
//KILL EXEC PGM=IEFBR14,REGION=4K
//D DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.HTSTNDAB,DISP=(OLD,DELETE),
//  VOL=SER=CDHSPK,UNIT=3330
//*
//* TEST 21  UPDATE PARM. STANDARDS TABLE
//*
//TEST21A EXEC AHQHUPDS,OUT=P
//*
//* UPDATE PARAMETER STANDARDS TABLE
//*
//SORT.INPUT  DD  *
42101F0110110,000 U-GMS/M3 (25 C) - 8 HOUR MAX, 1 PER YEAR                 00000100
42101F0120140,000 U-GMS/M3 (25 C) - 1 HOUR MAX, 1 PER YEAR                 00000200
42101F031079 PPM, 8 HOUR MAXIMUM, ONCE PER YEAR                            00000300
42101F0320735 PPM, 1 HOUR MAXIMUM, ONCE PER YEAR                           00000400
42101F0210210,000 U-GMS/M3 (0 C) - 8 HOUR MAX, 1 PER YEAR                  00000500
42101F0220240,000 U-GMS/M3 (0 C) - 1 HOUR MAX, 1 PER YEAR                  00000600
42401F05101                                                                00000700
42401F06102                                                                00000800
11101S01101PRIMARY STATE STANDARD FOR PARAMETER = 11101                    00000900
11101S01201SECONDARY STATE STANDARD FOR PARAMETER = 11101                  00001000
//TEST21B EXEC AHQPSTDS,
//              OUT=P,
//              PRMSTDS=HTSTNDAB
```

TEST22

```
//EPALMH22 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//*
//* TEST 22 - UPDATE MASTER FILE & DETAIL LIST
//*
//KILL EXEC PGM=IEFBR14,REGION=4K
//D DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQTRANS,DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,UNIT=3330
//D DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ102576,
//  DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,UNIT=3330
//TEST22A EXEC AHQTEDIT,
// PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//              OUT=P,
//              REGION.EDIT=90K,
//              PRIMARY=05,
//              PARMKFL=HTPRM1AH,
//              SITEFIL=HTSITEAB
//EDIT.OPTIONS DD *
NOFLAGW
//EDIT.INPUT DD  *
2340002003D0587402010062101221 51-035                                         2
2340002003D0587408010044101150110222                                          2
334A06B43501920217001010000010010055000001002011000000100300980000010040054   2
334A06B43501920217004010000010010056000001002010100000100300990000010040053   2
334A06B43501920217007010000010010066000001002012600000100300970000010040052   2
334A06B43501920217010010000010010078000001002011900000100301000000010040051   2
334A06B43501920217101010000010010093000001002013600000100300960000010040050   2
334A06B6210122151710201000001001-003000001002-01300000100301C2                2
334A06B43501920217104010000010010058000001002010400000100301010000010040049   2
334A06B43501920217107010000010010064000001002010500000100300980000010040050   2
334A06B43501920217110010000010010072000001002012200000100300990000010040051   2
334A06B43501920217201010000010010083000001002011900000100300970000010040052   2
334A06B43501920217204010000010010087000001002012800000100301000000010040053   2
334A06B6210322171720501000001001-013000001002-010                             2
334A06B43501920217207010000010010098000001002013200000100300960000010040054   2
334A06B43501920217210010000010010059800000100201010000010030101000001004005 3 2
334A06A426039907470030100000100100380000010020062000001003003700000010040024  1
334A06A42603990747303010000010010038000001002006200000100300370000010040024   2
334A06A42603990747307010000010010042000001002006800000100300380000010040022   2
1340001001A06574012004621012215 1-009-010-0120000                             3
1340001001A0657405200442102910540021002100420013                              3
//TEST22B EXEC AHQMFUPD,
//              OUT=P,
//              PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//              PRIMARY=05,
//              OLDMSTR=AQ102076,
//              NEWMSTR=AQ102576
//UPDATE.INPUT DD *
NOLIST
//
```

```
TEST23
         //EPALMH23 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5,MSGCLASS=P
         //KILL  EXEC PGM=IEFBR14
         //DD1 DD UNIT=3330,DISP=(OLD,DELETE),
         // VOL=SER=CDHSPK,
         //              DSNAME=CN.EPALMH.A087.AQTRANS
         //*
         //* TEST 23 - CONVERT SAROAD INPUT TRANSACTIONS TO AQDHS-II TRANSACTIONS
         //* AND SAVE CONVERTED TRANSACTIONS
         //TEST23  EXEC AHQCNVRT,OUT=P
         //*
         //* CONVERT OLD FORMAT TRANSACTIONS TO NEW FORMAT TRANSACTIONS
         //*
         //CONVERT.INPUT  DD *
         $2
          2000001004B0377601010011201810922000
         2200001004B037760103001120181092 600
         2200001004B037760104001120181092  70
         2200001004B037760105001120181092  50
         2200001004B037760106001120181092  80
         2200001004B037760107001120181092  90
         2200001004B037760108001120181092 100
         2200001004B037760109001120181092 120
         2200001004B037760110001120181092 150
         2200001004B037760111001120181092 100
         2200001004B037760112001120181092 110
         2200001004B037760113001120181092 120
         2200001004B037760114001120181092 130
         2200001004B037760115001120181092 160
         2200001004B037760116001120181092 170
         2200001004B037760117001120181092 170
         2200001004B037760118001120181092 170
         2200001004B037760119001120181092 180
         2200001004B037760120001120181092 200
         2200001004B037760121001120181092 210
         2200001004B037760122001120181092 170
         2200001004B037760123001120181092 160
         2200001004B037760124001120181092 140
         2200001004B037760125001120181092 100
         2200001004B037760126001120181092  90
         2200001004B037760127001120181092  60
         2200001004B037760128001120181092  40
         2200001004B037760129001120181092  80
         2200001004B037760130001120181092  30
         2200001004E027760201006120231281-0306210122151-020
         2200001004B037760201001120181092  20
         2200001004B037760203001120181092  60
         2200001004B037760204001120181092  70
         2200001004B037760205001120181092  50
         2200001004B037760206001120181092  80
         2200001004B037760207001120181092  90
         2200001004B037760208001120181092 100
         2200001004B037760209001120181092 120
         2200001004B037760210001120181092 150
         2200001004B037760211001120181092 100
         2200001004B037760212001120181092 110
         2200001004B037760213001120181092 120
```

```
TEST23
                  22000010048037760214001120181092  130
                  22000010048037760215001120181092  160
                  22000010048037760216001120181092  170
                  22000010048037760217001120181092  170
                  22000010048037760218001120181092  170
                  22000010048037760219001120181092  180
                  22000010048037760220001120181092  200
                  22000010048037760221001120181092  210
                  22000010048037760222001120181092  170
                  22000010048037760223001120181092  160
                  22000010048037760224001120181092  140
                  22000010048037760225001120181092  100
                  22000010048037760226001120181092   90
                  22000010048037760227001120181092   60
                  22000010048037760228001120181092   40
                  22000010048037760229001120181092   80
                  22000010048037760230001120181092   30
                  22000010048037760301001120181092   20
                  22000010048037760303001120181092   60
                  22000010048037760304001120181092   70
                  22000010048037760305001120181092   50
                  22000010048037760306001120181092   80
                  22000010048037760307001120181092   90
                  22000010048037760308001120181092  100
                  22000010048037760309001120181092  120
                  22000010048037760310001120181092  150
                  22000010048037760311001120181092  100
                  22000010048037760312001120181092  110
                  22000010048037760313001120181092  120
                  22000010048037760314001120181092  130
                  22000010048037760315001120181092  160
                  22000010048037760316001120181092  170
                  22000010048037760317001120181092  170
                  22000010048037760318001120181092  170
                  22000010048037760319001120181092  180
                  22000010048037760320001120181091   20
                  22000010048037760321001120181091   21
                  22000010048037760322001120181091   17
                  22000010048037760323001120181091   16
                  22000010048037760324001120181091   14
                  22000010048037760325001120181091   10
                  22000010048037760326001120181091    9
                  22000010048037760327001120181091    6
                  22000010048037760328001120181091    4
                  22000010048037760329001120181091    8
                  22000010048037760330001120181091    3
                  22000010048037760401001120181091    2
                  22000010048037760403001120181091    6
                  22000010048037760405001120181091    5
                  22000010048037760406001120181091    8
                  22000010048037760407001120181091    9
                  22000010048037760408001120181091   10
                  22000010048037760409001120181091   12
                  22000010048037760410001120181091   15
                  22000010048037760411001120181091   10
                  22000010048037760412001120181091   11
```

```
TEST23
                    22000010048037760413001120181091   12
                    22000010048037760414001120181091   13
                    22000010048037760415001120181091   16
                    22000010048037760416001120181091   17
                    22000010048037760417001120181091   17
                    22000010048037760418001120181091   17
                    22000010048037760419001120181091   18
                    22000010048037760420001120181091   20
                    22000010048037760421001120181091   21
                    22000010048037760422001120181091   17
                    22000010048037760423001120181091   16
                    22000010048037760424001120181091   14
                    22000010048037760425001120181091   10
                    22000010048037760426001120181091    9
                    22000010048037760427001120181091    6
                    22000010048037760428001120181091    4
                    22000010048037760429001120181091    8
                    22000010048037760430001120181091    3
                    22000010048037760501001120181091    2
                    22000010048037760503001120181091    6
                    22000010048037760504001120181091    7
                    22000010048037760505001120181091    5
                    22000010048037760506001120181091    8
                    22000010048037760507001120181091    9
                    22000010048037760508001120181091   10
                    22000010048037760509001120181091   12
                    22000010048037760510001120181091   15
                    22000010048037760511001120181091   10
                    22000010048037760512001120181091   11
                    22000010048037760513001120181091   12
                    22000010048037760514001120181091   13
                    22000010048037760515001120181091   16
                    22000010048037760516001120181091   17
                    22000010048037760517001120181091   17
                    22000010048037760518001120181091   17
                    22000010048037760519001120181091   18
                    22000010048037760520001120181091   20
                    22000010048037760521001120181091   21
                    22000010048037760522001120181091   17
                    22000010048037760523001120181091   16
                    22000010048037760524001120181091   14
                    22000010048037760525001120181091   10
                    22000010048037760526001120181091    9
                    22000010048037760527001120181091    6
                    22000010048037760528001120181091    4
                    22000010048037760529001120181091    8
                    22000010048037760530001120181091    3
                    22000010048037760601001120181091    2
                    22000010048037760603001120181091    6
                    22000010048037760604001120181091    7
                    22000010048037760605001120181091    5
                    22000010048037760606001120181091    8
                    22000010048037760607001120181091    9
                    22000010048037760608001120181091   10
                    22000010048037760609001120181091   12
                    22000010048037760610001120181091   15
```

```
TEST23
       2200001004803776061100112018109 1   10
       2200001004803776061200112018109 1   11
       2200001004803776061300112018109 1   12
       2200001004803776061400112018109 1   13
       2200001004803776061500112018109 1   16
       2200001004803776061600112018109 1   17
       2200001004803776061700112018109 1   17
       2200001004803776061800112018109 1   17
       2200001004803776061900112018109 1   18
       2200001004803776062000112018109 1   20
       2200001004803776062100112018109 1   21
       2200001004803776062200112018109 1   17
       2200001004803776062300112018109 1   16
       2200001004803776062400112018109 1   14
       2200001004803776062500112018109 1   10
       2200001004803776062600112018109 1    9
       2200001004803776062700112018109 1    6
       2200001004803776062800112018109 1    4
       2200001004803776062900112018109 1    8
       2200001004803776063000112018109 1    3
       2200001004803776070100112018109 1    2
       2200001004803776070300112018109 1    6
       2200001004803776070400112018109 1    7
       2200001004803776070500112018109 1    5
       2200001004803776070600112018109 1    8
       2200001004803776070700112018109 1    9
       2200001004803776070800112018109 1   10
       2200001004803776070900112018109 1   12
       2200001004803776071000112018109 1   15
       2200001004803776071100112018109 1   10
       2200001004803776071200112018109 1   11
       2200001004803776071300112018109 1   12
       2200001004803776071400112018109 1   13
       2200001004803776071500112018109 1   16
       2200001004803776071600112018109 1   17
       2200001004803776071700112018109 1   17
       2200001004803776071800112018109 1   17
       2200001004803776071900112018109 1   18
       2200001004803776072000112018109 1   20
       2200001004803776072100112018109 1   21
       2200001004803776072200112018109 1   17
       2200001004803776072300112018109 1   16
       2200001004803776072400112018109 1   14
       2200001004803776072500112018109 1   10
       2200001004803776072600112018109 1    9
       2200001004803776072700112018109 1    6
       2200001004803776072800112018109 1    4
       2200001004803776072900112018109 1    8
       2200001004803776073000112018109 1    3
       2200001004803776080100112018109 1    2
       2200001004803776080300112018109 1    6
       2200001004803776080400112018109 1    7
       2200001004803776080500112018109 1    5
       2200001004803776080600112018109 1    8
       2200001004803776080700112018109 1    9
       2200001004803776080800112018109 1   10
```

```
TEST23
                    22000010048037760809001120181091   12
                    22000010048037760810001120181091   15
                    22000010048037760811001120181091   10
                    22000010048037760812001120181091   11
                    22000010048037760813001120181091   12
                    22000010048037760814001120181091   13
                    22000010048037760815001120181091   16
                    22000010048037760816001120181091   17
                    22000010048037760817001120181091   17
                    22000010048037760818001120181091   17
                    22000010048037760819001120181091   18
                    22000010048037760820001120181091   20
                    22000010048037760821001120181091   21
                    22000010048037760822001120181091   17
                    22000010048037760823001120181091   16
                    22000010048037760824001120181091   14
                    22000010048037760825001120181091   10
                    22000010048037760826001120181091    9
                    22000010048037760827001120181091    6
                    22000010048037760828001120181091    4
                    22000010048037760829001120181091    8
                    22000010048037760830001120181091    3
                    22000010048037760901001120181091    2
                    22000010048037760903001120181091    6
                    22000010048037760904001120181091    7
                    22000010048037760905001120181091    5
                    $4
                    22000010048037760906001120181091    8
                    22000010048037760907001120181091    9
                    22000010048037760908001120181091   10
                    22000010048037760909001120181091   12
                    22000010048037760910001120181091   15
                    22000010048037760911001120181091   10
                    22000010048037760912001120181091   11
                    22000010048037760913001120181091   12
                    22000010048037760914001120181091   13
                    22000010048037760915001120181091   16
                    22000010048037760916001120181091   17
                    22000010048037760917001120181091   17
                    22000010048037760918001120181091   17
                    22000010048037760919001120181091   18
                    22000010048037760920001120181091   20
                    22000010048037760921001120181091   21
                    22000010048037760922001120181091   17
                    22000010048037760923001120181091   16
                    22000010048037760924001120181091   14
                    22000010048037760925001120181091   10
                    22000010048037760926001120181091    9
                    22000010048037760927001120181091    6
                    22000010048037760928001120181091    4
                    22000010048037760929001120181091    8
                    22000010048037760930001120181091    3
                    22000010048037761001001120181091    2
                    22000010048037761003001120181091    6
                    22000010048037761004001120181091    7
                    22000010048037761005001120181091    5
```

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TEST23
                 22000010048037761006001120181091    8
                 22000010048037761007001120181091    9
                 22000010048037761008001120181091   10
                 22000010048037761009001120181091   12
                 22000010048037761010001120181091   15
                 22000010048037761011001120181091   10
                 22000010048037761012001120181091   11
                 22000010048037761013001120181091   12
                 22000010048037761014001120181091   13
                 22000010048037761015001120181091   16
                 22000010048037761016001120181091   17
                 22000010048037761017001120181091   17
                 22000010048037761018001120181091   17
                 22000010048037761019001120181091   18
                 22000010048037761020001120181091   20
                 22000010048037761021001120181091   21
                 22000010048037761022001120181091   17
                 22000010048037761023001120181091   16
                 22000010048037761024001120181091   14
                 22000010048037761025001120181091   10
                 22000010048037761026001120181091    9
                 22000010048037761027001120181091    6
                 22000010048037761028001120181091    4
                 22000010048037761029001120181091    8
                 22000010048037761030001120181091    3
                 22000010048037761101001120181091    2
                 22000010048037761103001120181091    6
                 22000010048037761104001120181091    7
                 22000010048037761105001120181091    5
                 22000010048037761106001120181091    8
                 22000010048037761107001120181091    9
                 22000010048037761108001120181091   10
                 22000010048037761109001120181091   12
                 22000010048037761110001120181091   15
                 22000010048037761111001120181091   10
                 22000010048037761112001120181091   11
                 22000010048037761113001120181091   12
                 22000010048037761114001120181091   13
                 22000010048037761115001120181091   16
                 22000010048037761116001120181091   17
                 22000010048037761117001120181091   17
                 22000010048037761118001120181091   17
                 22000010048037761119001120181091   18
                 22000010048037761120001120181091   20
                 22000010048037761121001120181091   21
                 22000010048037761122001120181091   17
                 22000010048037761123001120181091   16
                 22000010048037761124001120181091   14
                 22000010048037761125001120181091   10
                 22000010048037761126001120181091    9
                 22000010048037761127001120181091    6
                 22000010048037761128001120181091    4
                 22000010048037761129001120181091    8
                 22000010048037761130001120181091    3
                 22000010048037761201001120181091    2
                 22000010048037761203001120181091    6
```

```
TEST23
                  2200001004803776120400112018109 1     7
                  2200001004803776120500112018109 1     5
                  2200001004803776120600112018109 1     8
                  2200001004803776120700112018109 1     9
                  2200001004803776120800112018109 1    10
                  2200001004803776120900112018109 1    12
                  2200001004803776121000112018109 1    15
                  2200001004803776121100112018109 1    10
                  2200001004803776121200112018109 1    11
                  2200001004803776121300112018109 1    12
                  2200001004803776121400112018109 1    13
                  2200001004803776121500112018109 1    16
                  2200001004803776121600112018109 1    17
                  2200001004803776121700112018109 1    17
                  2200001004803776121800112018109 1    17
                  2200001004803776121900112018109 1    18
                  2200001004803776122000112018109 1    20
                  2200001004803776122100112018109 1    21
                  2200001004803776122200112018109 1    17
                  2200001004803776122300112018109 1    16
                  2200001004803776122400112018109 1    14
                  2200001004803776122500112018109 1    10
                  2200001004803776122600112018109 1     9
                  2200001004803776122700112018109 1     6
                  2200001004803776122800112018109 1     4
                  2200001004803776122900112018109 1     8
                  2200001004803776123000112018109 1     3
                  2340003010G047761201006210122151-01561202312810012
                  //CONVERT.AGSOPTIN  DD *
                  NOLIST
                  //CONVERT.OUTPUT  DD UNIT=3330,VOL=SER=CDHSPK,
                  //              DISP=(NEW,CATLG,DELETE),
                  //              SPACE=(TRK,(08,2),RLSE),
                  //              DSNAME=CN.EPALMH.A087.AQTRANS
```

```
TEST24
          //EPALMH24 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
          //KILL   EXEC PGM=IEFBR14
          //DD1 DD UNIT=3330,DISP=(OLD,DELETE),
          //  VOL=SER=CDHSPK,
          //  DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.WRONG76
          //TEST24  EXEC AHQFUPDT,
          //              PROJECT='CN.EPALMH.A087.CDMS.HQ.AQS',
          // R1=100K,R2=100K,
          //              PRIMARY=10,
          //              NEWMSTR=WRONG76,
          //              OLDMSTR=AQ102576
          //EDIT.OPTIONS  DD *
           NOLIST FLAGW
          //EDIT.INPUT  DD DSNAME=CN.EPALMH.A087.AQTRANS,
          //          DISP=(OLD,DELETE)
          //UPDATE.INPUT DD *
           NOFLAGW
          //
```

TEST25

```
//EPALMH25 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//KILL   EXEC PGM=IEFBR14
//ANSWERS  DD UNIT=3330,DISP=(OLD,DELETE),
//  VOL=SER=CDHSPK,DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.MDCGFLG
//TEST25  EXEC  AHQRETVR,
//        MSTRFIL=DUPS,
//        ANSWRFL=MDCGFLG,
//        DISP='NEW,CATLG,DELETE'
//COMPILE.INPUT  DD *
$$SELECT USER
              GO TO USER-PROC.
         USER-STAT-CHNG.
              IF DATA-FIELD (SUB) NOT EQUAL '9999'
                MOVE 'A' TO STATUS-FLAG (SUB).
              ADD 1 TO SUB.
         USER-END.  EXIT.
         USER-PROC.
              MOVE TRUE TO RECORD-QUALIFIES-SW.
        *     ALL RECORDS NEED TO BE COPIED.
              MOVE 1 TO SUB,
              PERFORM USER-STAT-CHNG THRU USER-END NBR-OF-READINGS TIMES.
         USER-PROC-END.  EXIT.
$$END
//
```

TEST26

```
//EPALMH26 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//KILL  EXEC PGM=IEFBR14
//DD2 DD UNIT=3330,DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,
//  DSN=CV.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ1027V2
//*
//* TEST 26 - SUBMIT DATA TO SAROAD
//*
//TEST26  EXEC AHQACNVT,
//              OLDMSTR=AQ102876,
//              NEWMSTR='AQ1027V2'
//*
//* SUBMIT PREVIOUSLY UNSUBMITTED READINGS TO SAROAD
//*
//SUBMIT.ADDFILE  DD SYSOUT=P
//SUBMIT.CHNGEFL  DD SYSOUT=P
```

TEST27

```
//EPALMH27 JOB (A087,LMH,,LMH,,2),TIME=1,PRTY=5
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=3330,DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,
// DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQ76DATA
//*
//* TEST 27  RETRIEVE UN YEAR 1976 AND SAVE FILE
//*
//TEST27A EXEC AHQRETVR,
//              MSTRFIL=AQ1027V2,
//              PRIMARY=15,
//              ANSWRFL=AQ76DATA,
//              DISP='NEW,CATLG,DELETE'
//COMPILE.INPUT  DD *
$$SELECT
YEAR                        = '76'
$$END
//TEST27B EXEC AHQDUMP,
//              MSTRFIL=AQ76DATA
```

TEST28

```
//EPALMH28 JOB (A087,LMH,,LMH,,05),TIME=1,PRTY=5
//*  TEST 28    -  DATA ANALYSES OF FILE CREATED IN TEST 17
//* SO2 DATA FROM 1972 TO PRESENT
//*
//TEST28A EXEC AHQMSENT,
//              MSTRFIL=SO2G72,
//              STATFIL=STAT28
//TEST28B EXEC AHQDANAL,
//              MSTRFIL=STAT28,
//              STATFIL=STAT28B
//TEST28C EXEC AHQSLIST,
//              STATFIL=STAT28B
```

TEST29

```
//EPALMH29 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//*
//* TEST 29 - REPEAT TFST 17 RETRIEVAL EXCEPT NOW IN SLIDING AVERAGE
//*  MODE AND OBTAIN SLIDING AVERAGE
//*
//* S02 DATA FROM 1972 TO PRESENT
//*
//TEST29A EXEC AHQRETVR,
//             MSTRFIL=AQ102076,
//             ANSWRFL=S02G72SA
//COMPILE.INPUT   DD *
$$SELECT                SLIDING
PARAMETER-CODE           = '42401'                                 AND
YEAR                   N < '72'
$$END
//TEST29B EXEC AHQIAVGS,
//             MSTRFIL=S02G72SA,
//             ANSWRFL=ITSLDA29
//AVERAGE.INPUT   DD *
AVERAGE 03
//TEST29C EXEC AHQELIST,
//             REGION.REPORT=130K,
//             MSTRFIL=ITSLDA29
```

TEST30

```
//EPALMH30 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//*
//* TEST 30  LIST OF SO2 DATA  CREATED BY TEST 17
//*
//TEST30A  EXEC AHQELIST,
//      REGION.REPORT=130K,
//      MSTRFIL=SO2G72
//REPORT.INPUT  DD *
DISPLAY   < 9997
//
```

TEST31

```
//EPALMH31 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//*  TEST 31    -  DATA ANALYSES OF FILE CREATED IN TEST 27
//* ALL 1976 DATA
//*
//TEST31A EXEC AHQMSENT,
//              MSTRFIL=AQ76DATA,
//              STATFIL=STAT31
//TEST31B EXEC AHQDANAL,
//              MSTRFIL=STAT31,
//              STATFIL=STAT31B
//TEST31C EXEC AHQSLIST,
//              STATFIL=STAT31B
```

TEST32

```
//EPALMH32 JOB (A087,LMH,,LMH,,5),TIME=1,PRTY=5
//*
//*  TEST 32    -  SLIDING AVERAGE OF FILE BASED ON SAME RETRIEVAL AS
//*  TEST 27, BUT THIS TIME RETRIEVED IN SLIDING AVERAGE MODE
//* ALL 1976 DATA
//*
//TEST32A EXEC AHQRETVR,
//             MSTRFIL=AQ1027V2,
//             ANSWRFL=SADATA76
//COMPILE.INPUT  DD *
$$SELECT                 SLIDING
YEAR                      = '76'
$$END
//TEST32B EXEC AHQIAVGS,
//             MSTRFIL=SADATA76,
//             ANSWRFL=ITSLDA32
//AVERAGE.INPUT  DD *
AVERAGE 3
//TEST32C EXEC AHQELIST,
//             REGION.REPORT=130K,
//             MSTRFIL=ITSLDA32
```

```
TEST33
          //EPALMH33 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
          //*
          //* TEST 33  LIST OF DATA CREATED BY TEST 27
          //* ALL 1976 DATA
          //*
          //TEST33A  EXEC AMQELIST,
          //     REGION.REPORT=130K,
          //     MSTRFIL=AQ76DATA
          //REPORT.INPUT DD *
          DISPLAY N = 0
          //
```

```
TEST34
          //EPALMH34 JOB (A087,LMH,,LMH,,15),TIME=1,PRTY=5
          //SCRATCH EXEC PGM=IEFBR14
          //LD DD UNIT=3330,DISP=(OLD,DELETE),
          // VOL=SER=CDHSPK,
          // DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.RTANSR15
          //S DD UNIT=3330,DISP=(OLD,DELETE),
          // VOL=SER=CDHSPK,
          // DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.RTANSR16
          //Q DD UNIT=3330,DISP=(OLD,DELETE),
          // VOL=SER=CDHSPK,
          // DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQFINAL
          //TEST34A EXEC AHQRETVR,
          //             MSTRFIL=AQ1027V2,
          //             ANSWRFL=RTANSR15
          //COMPILE.INPUT  DD *
          $$SELECT
          YEAR                      > '71'
          $$END
          //TEST34B EXEC AHQRETVR,
          //             MSTRFIL=AQ1027V2,
          //             ANSWRFL=RTANSR16
          //COMPILE.INPUT  DD *
          $$SELECT
          YEAR                      < '72'
          $$END
          //MERGE EXEC AHQMERGE,
          // PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
          //            INFILE1=RTANSR15,
          //            INFILE2=RTANSR16,
          //            NEWMSTR=AQFINAL
          //MERGE.NEWMSTR DD DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.AQFINAL,
          // DISP=(NEW,CATLG),
          // UNIT=3330,VOL=SER=CDHSPK,
          // SPACE=(TRK,(20,5),RLSE),
          // DCB=(RECFM=VB,LRECL=194,BLKSIZE=1556)
          //TEST34C EXEC AHQRETVR,
          //             MSTRFIL=AQ1027V2,
          //             ANSWRFL=RTANSR34
          //COMPILE.INPUT  DD *
          $$SELECT
          IDENT-KEY                 = '100001001E021710601004240111072'       OR
          IDENT-KEY                 = '370001234F058710101001110191010'
          $$END
          //TEST34D EXEC AHQRETVR,
          //             MSTRFIL=AQFINAL,
          //             ANSWRFL=RTANSRMG
          //COMPILE.INPUT  DD *
          $$SELECT
          IDENT-KEY                 = '100001001E021710601004240111072'       OR
          IDENT-KEY                 = '370001234F058710101001110191010'
          $$END
          //PRINT1   EXEC AHQELIST,
          // REGION.REPORT=130K,
          //         MSTRFIL=RTANSRMG
          //PRINT2   EXEC AHQELIST,
          // REGION.REPORT=130K,


          //         MSTRFIL=RTANSR34
```

```
TEST35
          //EPALMH35 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
          //*
          //* TEST 35 - PROCESS RETRIEVAL REQUESTS AND COMPILE PROGRAM TO
          //*     RETRIEVE STATE 12, SITE 001 RECORDS ON A LATER EXECUTION
          //*
          //TEST35A  EXEC  AHORTRCL
          //COMPILE.INPUT  DD *
          $$SELECT
          STATE                   = '12'                                      AND
          SITE                    = '001'
          $$END
          //
```

TEST36

```
//EPALMH36 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//*
//* TEST 36 - EXECUTE THE RETRIEVAL PROGRAM COMPILED IN TEST 35
//*  AND DO A DETAIL LIS  OF THE RESULTING ANSWER FILE
//*
//KILL  EXEC PGM=IEFBR14
//IN1  DD DISP=(OLD,DELETE),UNIT=3330,
// VOL=SER=CDMSPK,
// DSN=CN.EPALMH.A087.CDMS.HQ.AQS.DATA.RTANSR36
//*
//TEST36A  EXEC  AHQRTRGO,
//      PRIMARY=10,
//         MSTRFIL=AQFINAL,
//         ANSWRFL=RTANSR36
//TEST36B  EXEC AHQELIST,
// REGION.REPORT=130K,
//     MSTRFIL=RTANSR36
```

```
TEST37
        //EPALMH37 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
        //*
        //* UPDATE MASTER FILE USING CONVERTED TRANSACTIONS
        //*
        //TEST37A EXEC AMQIEDIT,
        // PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
        // REGION.EDIT=100K,
        //   PRIMARY=5
        //EDIT.OPTIONS DD *
        LIST FLAGS
        //EDIT.INPUT  DD  *
        1340003010G041750822006110123121002     000100060005000400030003                2
        1340002001005173100500611042114100030004000300020004000500030002                2
        1100001001E021740708086110131281-291     005200880089010301270169               2
        2340003002G04C730307486              6                                          2
        340003002G04C7402911843501910110005                                            2
         2340003002G04C7401911843501910110005
        2340003002G0497401911843501910110005                                            7
        7
        1                                                                               2
        199                                                                             2
        111                                                                             2
        1111111                                                                         2
        11111111110                                                                     2
        1111111111011                                                                   2
        1111111111A010                                                                  2
        1111111111A01111                                                                2
        1111111111A01170                                                                2
        1111111111A011701111991111111119                                                2
        1111111111A01170111111111111111111AAAA                                          2
        1111111111A0117011111111111111111                                               2
        2111111111A01C70       43501910119997                                           2
        2111111111A01C70     1 43501910119997                                           2
        2111111111A01C7099999Z43501910119997                                            2
        2111111111A01C7099991Z43501910119997                                            2
        11099979970971701111119999999971                                                2
        11000019970971701111119999999971                                                2
        1100001001Q971701111119999999971                                                2
        1100001001E971701111119999999971                                                2
        1340003002G0417401010011101910109997                                            2
        337F05A11101910107105040000012349997                                            2
        1340001001A067740225101120181091000100010001                                    2
        337099A99999979797105040099979970001                                            2
        337099899999979797105040000019970001                                            2
        337099899999979797105040000012340001                                            2
        337F99899999979797105040000012340001                                            2
        337F05A11101910107105041 1     1  1                                             2
        234003002G04C74019118499999979799999                                            2
        234003002G04C74019118443501979799999                                            2
        234003002G04C74019118443501119799999                                            2
        234003002G04C7401911846210322170-7H7                                            2
        234003002G04C7401911846210322170-7H74240111021-7776210322170-990                2
        234003002G04C7401911841110192021-500                                            2
        234003002G04C7401911841110192021-5006210322170-5Z81110192021-321                2
        1340001001A0617001010042401110210440-2191732-400                                2
        1340001001A0617001010062101221500440-XYZ1732-ABC                                2
```

```
TEST37       334A068424011[illegible]21700101000001001-007000001002-1810000010030050                         2
             334A06862101221507001010000001001-ABC000001002-CBA0000010031500                         2
             1340001003A06175051308611012013100070080                                                2
             1340001003A06175051316611012013100070080                                                2
             1340001003A06275051300611012013100070080                                                2
             1340001003A06275051301611012013100070080                                                2
             1340001003A06275051316611012013100070080                                                2
             1340001003A06275051317611012013100070080                                                2
             1340001003A06375051300611012013100070080                                                2
             1340001003A06375051301611012013100070080                                                2
             1340001003A06175051300611012013100070080                                                2
             1340001003A06375051302611012013100070080                                                2
             1340001003A06475051300611012013100070080                                                2
             1340001003A06475051301611012013100070080                                                2
             1340001003A06475051302611012013100070080                                                2
             1340001003A06475051303611012013100070080                                                2
             1340001003A06575051300611012013100070080                                                2
             1340001003A06575051301611012013100070080                                                2
             1340001003A06575051302611012013100070080                                                2
             1340001003A06575051303611012013100070080                                                2
             1340001003A06575051304611012013100070080                                                2
             1340001003A06575051305611012013100070080                                                2
             1340001003A06675051300611012013100070080                                                2
             1340001003A06675051301611012013100070080                                                2
             1340001003A06675051302611012013100070080                                                2
             1340001003A06675051303611012013100070080                                                2
             1340001003A06675051304611012013100070080                                                2
             1340001003A06675051305611012013100070080                                                2
             1340001003A06675051307611012013100070080                                                2
             1340001003A06675051306611012013100070080                                                2
             1340001003A06775051300611012013100070080                                                2
             1340001003A06775051300611012013100070080                                                2
             1340001003A06775051302611012013100070080                                                2
             1340001003A06775051301611012013100070080                                                2
             1340001003A06775051303611012013100070080                                                2
             1340001003A06775051305611012013100070080                                                2
             1340001003A06775051304611012013100070080                                                2
             1340001003A06775051304611012013100070080                                                2
             1340001003A06775051306611012013100070080                                                2
             1340001003A06775051307611012013100070080                                                2
             1340001003A06775051308611012013100070080                                                2
             1340001003A06775051309611012013100070080                                                2
             1340001003A06775051309611012013100070080                                                2
             1340001003A06775051310611012013100070080                                                2
             1340001003A06775051311611012013100070080                                                2
             1340001003A06775051316611012013100070080                                                2
             1340001003A06775051316611012013100070080                                                2
             1340001003A06575051317611012013100070080                                                2
             1340001003A06375051317611012013100070080                                                2
             1340001003A06375051308611012013100070080                                                2
             1340001003A06375051323611012013100070080                                                2
             1340001003A06175051309611012013100070080                                                2
             1340001003A06175051322611012013100070080                                                2
             1340001003A06675051316611012013100070080                                                2
             1340001003A06675051308611012013100070080                                                2
             1340001003A06575051306611012013100070080
```

```
TEST37
            1340001003A06475051304611012013100070080                                                  2
            1340001003A06375051303611012013100070080                                                  2
            1340001003A06275051302611012013100070080                                                  2
            1340001003A06275051315611012013100070080                                                  2
            1340001003A06275051318611012013100070080                                                  2
            1340001003A06065051399611012013100070080                                                  2
            1340001003A06865051399611012013100070080                                                  2
            1340001003A06A65051300611012013100070080                                                  2
            1340001003A06465051324611012013100070080                                                  2
            2340002001D0587408010044101150110196                                                      2
            2340002001D0597408010744101150110196                                                      2
            2340002001D05A7408011244101150110196                                                      2
            2340002001D05B7408012344101150110196                                                      2
            2340002001D0577408012344101150110196                                                      2
            2340002001D0507408012044101150110196                                                      2
            2340002001D0507408012944101150110196                                                      2
            2340002001D0587408019944101150110196                                                      2
            2340002001D05R7408019944101150110196                                                      2
            337F05111101910107112140000012340025                                                      2
            337F05211101910107112141700012340025                                                      2
            337F05211101910107112140100012340025                                                      2
            337F05511101910107112140500012340025                                                      2
            337F05711101910107112141100012340025                                                      2
            337F05711101910107112140500012340025                                                      2
            337F05A11101910107112140500012340025                                                      2
            337F05A11101910107112142300012340025                                                      2
            337F05A11101910107112149900012340025                                                      2
            337F05711101910107112141500012340025                                                      2
            337F05611101910107112141200012340025                                                      2
            337F05L11101910107112147700012340025                                                      2
            1340003002G0417401010011101910109997                                                      2
            337F05811101910107105040000012349997                                                      2
            2340003002G0497401010011101910109997                                                      2
            2340003002G04C7401051811101910109997                                                      2
            //
```

TEST38

```
//EPALMH38 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//TEST38A EXEC AMQTEDIT,
//   PROJECT='CN.EPALMH,A087.CDH9.HQ.AQS',
// REGION.EDIT=100K,
//   PRIMARY=5
//*
//* UPDATE MASTER FILE USING CONVERTED TRANSACTIONS
//*
//EDIT.OPTIONS DD *
UTTER NONSENSE
//*
//EDIT.INPUT  DD  *
1340003010G0417508220061101231210002     00010006000500040003000 3                2
//
```

```
TEST39
            //EPALMH39 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
            //TEST39A EXEC AHQRTRCL,
            //         PGMSAVE=RXRETR39
            //COMPILE.INPUT DD *
            $$SELECT
            STATUS-FLAG                = 'S'                                              AND
            DATA-FIELD                 > '.001'                                           AND
            PARAMETER-CODE             = '62101'
            $$END
            //TEST39B EXEC AHQRTRGO,
            //         PROGRAM=RXRETR39,
            //         MSTRFIL=AQFINAL,
            //         ANSWRFL=RTANSR39
            //TEST39C  EXEC AHQELIST,
            // REGION.REPORT=150K,
            //       MSTRFIL=RTANSR39
            //REPORT.INPUT  DD *
            DISPLAY < 9997
            //
```

TEST40

```
//EPALMH40 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//TEST40A EXEC AHQRTRCL,
//          PGMSAVE=RXRETR40
//COMPILE.INPUT DD *
$$SELECT                  SLIDING
DATA-FIELD                 < '0'
$$END
//TEST40B EXEC AHQRTRGO,
//          PROGRAM=RXRETR40,
//          MSTRFIL=AQFINAL,
//          ANSWRFL=RTANSR40
//TEST40C EXEC AHQIAVGS,
//        MSTRFIL=RTANSR40,
//     PRIMARY=10,
//        ANSWRFL=ITAVGS40
//AVERAGE.INPUT DD  *
AVERAGE 5
//TEST40D  EXEC AHQELIST,
// REGION.REPORT=150K,
//        MSTRFIL=ITAVGS40
//REPORT.INPUT  DD *
DISPLAY < 9997
//
```

TEST41

```
//EPALMH41 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
//TEST41A EXEC AHQRTRCL,
//          PGMSAVE=RXRETR41
//COMPILE.INPUT DD *
$$SELECT
DATA-FIELD               = DATA-FIELD                                          AND
((DATA-FIELD             > '-99'                                               AND
DECIMAL-CODE             = '1')                                                AND
DATA-FIELD             N = '2')
$$END
//TEST41B EXEC AHQRTRGO,
// UNIT=3330,SERIAL=CDHSPK,
//          PROGRAM=RXRETR41,
//          MSTRFIL=AGFINAL,
//          ANSWRFL=RTANSR41
//TEST41C  EXEC AHQELIST,
// REGION.REPORT=150K,
//        MSTRFIL=RTANSR41
//REPORT.INPUT  DD *
SUM    DISPLAY > .1
//
```

```
TEST42
          //EPALMH42 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
          //*
          //* TEST 42 - RETRIEVE FORM-CODE 1, HOURLY DATA AND DO A SLIDING
          //*  AVERAGE OVER 12 INTERVALS ON THE ANSWER FILE
          //*
          //KILL EXEC PGM=IEFBR14
          //DEL DD UNIT=3330,DISP=(OLD,DELETE),
          // VOL=SER=CDHSPK,
          //    DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.RTANSR42
          //TEST42A EXEC AHQRETVR,
          //              DISP='NEW,CATLG,DELETE',
          //              MSTRFIL=AQFINAL,
          //              ANSWRFL=RTANSR42
          //COMPILE.INPUT DD *
          $$SELECT                  SLIDING
          FORM-CODE                  = '1'                                          AND
          TIME-CODE                  = '1'
          $$END
          //TEST42B EXEC AHQIAVGS,
          //              MSTRFIL=RTANSR42,
          //              ANSWRFL=ITSLDA42
          //AVERAGE.INPUT DD *
          AVERAGE 12
          //TEST42C EXEC AHQELIST,
          // REGION.REPORT=150K,
          //              MSTRFIL=ITSLDA42
          //REPORT.INPUT  DD *
          DISPLAY > 1
          //
```

TEST43

```
//EPALMH43 JOB ($087,LMH,,LMH,,3),TIME=1,PRTY=5
//*
//* TEST 43 - OBTAIN  SLIDING AVERAGE ON ANSWER FILE FROM TEST 42 OVER
//*  3 INTERVALS
//*
//TEST43A EXEC AHQIAVGS,
//              MSTRFIL=RTANSR42,
//              ANSWRFL=ITSLDA43
//AVERAGE.INPUT DD *
AVERAGE 3
//TEST43B EXEC AHQLLIST,
// REGION.REPORT=150K,
//              MSTRFIL=ITSLDA43
```

```
TEST44
           //EPALMH44 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5
           //*
           //* TEST 44 - RETRIEVE ALL FORM-CODE 2 DATA AND FORM-CODE 3 DATA WITH
           //*  PARM. CODE 61101 AND DU A SLIDING AVERAGE OVER 6 INTERVALS ON
           //*  ANSWER FILE
           //*
           //KILL EXEC PGM=IEFBR14
           //DEL DD UNIT=3330,DISP=(OLD,DELETE),
           // VOL=SER=CDHSPK,
           // DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.RTANSR44
           //TEST44A EXEC AHQRETVR,
           //              DISP='NEW,CATLG,DELETE',
           //              MSTRFIL=AQFINAL,
           //              ANSWRFL=RTANSR44
           //COMPILE.INPUT DD *
           $$SELECT                SLIDING
           FORM-CODE                = '2'                                   OR
           (FORM-CODE               = '3'                                   AND
           PARAMETER-CODE           = '61101')
           $$END
           //TEST44B EXEC AHQIAVGS,
           //              MSTRFIL=RTANSR44,
           //              ANSWRFL=ITSLDA44
           //AVERAGE.INPUT DD *
           AVERAGE 6
           //TEST44C EXEC AHQELIST,
           // REGION.REPORT=150K,
           //              MSTRFIL=ITSLDA44
           //REPORT.INPUT  DD *
           DISPLAY > -10
           //
```

TEST45

```
//EPALMH45 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//*
//* TEST 45 - DO A SLIDING AVERAGE OVER 2 INTERVALS ON ANSWER FILE FROM
//*  TEST 44
//*
//TEST45A EXEC AHQIAVGS,
//              OUT=P,
//              MSTRFIL=RTANSR44,
//              ANSWRFL=ITSLDA45
//AVERAGE.INPUT DD *
AVERAGE  2
//TEST45B EXEC AHQELIST,
//              OUT=P,
// REGION.REPORT=150K,
//              MSTRFIL=ITSLDA45
//REPORT.INPUT  DD *
DISPLAY > -10
//
```

TEST46

```
//EPALMH46 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//KILL  EXEC PGM=IEFBR14
//DEL DD UNIT=3330,DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,
// DSN=CV.EPALMH.A087.CDHS.HQ.AQS.DATA.RTANSR46
//*
//* TEST 46 - RETRIEVE A STANDARD ANSWER FILE BASED ON DATA-FIELD
//*
//TEST46A EXEC AHQRTRCL,OUT=P
//COMPILE.INPUT DD *
$$SELECT
DATA-FIELD                < '-.1'                                   OR
DATA-FIELD                > '20'
$$END
//TEST46B EXEC AHQRTRGO,
//              OUT=P,
//              DISP='NEW,CATLG,DELETE',
//              MSTRFIL=AQFINAL,
//              ANSWRFL=RTANSR46
//
```

TEST47

```
 /EPALMH47 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//* TEST 47 - DO A STATISTICAL ANALYSIS ON FILE RETRIEVED IN TEST 46
//*
//TEST47A EXEC AHQMSENT,
//              OUT=P,
//              MSTRFIL=RTANSR46,
//              STATFIL=STAT47
//TEST47B EXEC AHQDANAL,
//              MSTRFIL=STAT47,
//              STATFIL=STAT47B
//TEST47C EXEC AHQSLIST,
//              OUT=P,
//              STATFIL=STAT47B
```

TEST48

```
//FPALMH48 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//*
//*
//* TEST 48 - CONVERT SAROAD TRANSACTIONS TO AQDHS-II TRANSACTIONS
//*  WITHOUT SPECIFYING AN OPTION CARD
//*
//*
//* CONVERT OLD FORMAT TRANSACTIONS TO NEW FORMAT TRANSACTIONS
//TEST48  EXEC AHQCNVRT,OUT=P
//CONVERT.AQSOPTIN DD *
//CONVERT.INPUT  DD *
$2
2340001002A068700301004260399074O062
2340001002A06870040100426O399074-999
2340001002A06870060100426O399074-999
2340001002A068700701004260399074O068
2340001002A06873010100426O399074-054
//CONVERT.OUTPUT  DD UNIT=SYSDA,DISP=(NEW,PASS),
//  SPACE=(TRK,(2,1),RLSE),
//  DSN=&TRANS
```

TEST49

```
//EPAL4H49 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//*
//* TEST 49 - CONVERT SAROAD INPUT TRANSACTIONS TO AQDHS-II TRANSAC-
//*  TIONS WITH LIST OPTION SPECIFIED
//*
//TEST49  EXEC AHQCNVRT,OUT=P
//CONVERT.AQSOPTIN DD *
LIST
//CONVERT.INPUT  DD *
$2
2340001002A06873020100426039907400053
2340001002A068730301004260399074-999
2340001002A06873040100426039907400085
//CONVERT.OUTPUT  DD UNIT=SYSDA,DISP=(NEW,PASS),
//  SPACE=(TRK,(2,1),RLSE),
//  DSN=&TRANS
```

```
TEST50
          //EPALMH50 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
          //*
          //* TEST 50 - CONVERT SAROAD INPUT TRANSACTIONS TO AQDHS-II TRANSAC-
          //*  TIONS WITH 'NOLIST' OPTION SPECIFIED
          //*
          //TEST50  EXEC AHQCNVRT,OUT=P
          //CONVERT.AQSOPTIN DD *
          NOLIST
          //CONVERT.INPUT  DD *
          $2
          2340001002A0687302010042603990740053
          2340001002A068730301004260399074-999
          2340001002A0687304010042603990740085
          //CONVERT.OUTPUT  DD UNIT=SYSDA,DISP=(NEW,PASS),
          //  SPACE=(TRK,(2,1),RLSE),
          //  DSN=&TRANS
```

TESTS1

```
//EPALMHS1 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
//*
//* TEST 51 - ATTEMPT TO CONVERT INVALID SAROAD TRANSACTIONS TO AQDHS
//*  TRANSACTIONS
//*
//TESTS1  EXEC AHQCNVRT,OUT=P
//CONVERT.INPUT  DD *
$2
720000100480377001030011201810920060
A20000100480377001030011201810920060
120000100480307001030011201810920060
120000100480307001034711201810920060
12000010048036700103AB1120181092-999

//CONVERT.AQSOPTIN DD      *
//CONVERT.OUTPUT  DD UNIT=SYSDA,DISP=(NEW,PASS),
//  SPACE=(TRK,(2,1),RLSE),
//  DSN=&TRANS
```

TEST52

```
//EPALMH52 JOB (A087,LMH,,LMH,,3),TIME=1,PRTY=5,MSGCLASS=P
// EXEC PGM=IEFBR14
//DEL DD UNIT=3330,DISP=(OLD,DELETE),
// VOL=SER=CDHSPK,
// DSN=CN.EPALMH.A087.CDHS.HQ.AQS.DATA.STAT15
//*
//* TEST 52 - TRY RUNNING FILE MAINTENANCE ON A FLAGGED MASTER FILE
//*
//TEST52A EXEC AHQMSENT,
//    OUT=P,
//    MSTRFIL=AQFINAL,
//    PRIMARY=10,
//     SECNDRY=2,
//     STATFIL=STAT15
//TEST52B EXEC AHQMFUPD,
//    OUT=P,
// PROJECT='CN.EPALMH.A087.CDHS.HQ.AQS',
//    OLDMSTR=STAT15
//UPDATE.AQSINTRN  DD  DUMMY
//UPDATE.AQSNEWMS  DD  DUMMY
```

TEST53

```
//EPALMH53 JOB (A087,LMH,,LMH,,1),TIME=1,PRTY=5
//*
//* TEST 53 - TRY RUNNING STATISTICAL ANALYSIS ON AN UNFLAGGED MASTER
//*  FILE
//*
//TEST53 EXEC AHQDANAL,
//  LRECL=182,BLKSIZE=2002,
//             MSTRFIL=AQFINAL
//
```

```
//PNRTST1 JOB RTI.C44.PU2154,MCMASTER,PRTY=0,FORMS=WHITE,1=1,P=250
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CDMS.JCL
//*
//* BUILD OFFICIAL NADB EMISSION FACTORS TABLE
//*
//TEST1   EXEC PNRTBGEN,
//              EFTABLE=NADBEFTB
//GENERATE.INPUT  DD  *                                                             1
1010010174256000000                                                                 2
10100101111010000017000 A                                                           2
10100101424010000038000 S                                                           2
10100101426020000018000                                                             2
10100101431010000000030                                                             2
10100101421010000001000                                                             1
1010010274256000000                                                                 2
10100102111010000002000 A                                                           2
10100102424010000038000 S                                                           2
10100102426020000010500                                                             2
10100102431010000000200                                                             2
10100102421010000006000                                                             1
1010010374256000000                                                                 2
10100103111010000017000 A                                                           2
10100103424010000038000 S                                                           2
10100103426020000018000                                                             2
10100103431010000000030                                                             2
10100103421010000001000                                                             1
1010010474256000000                                                                 2
10100104111010000002000 A                                                           2
10100104424010000038000 S                                                           2
10100104426020000010500                                                             2
10100104431010000000200                                                             2
10100104421010000006000                                                             1
1010010574256000000                                                                 2
10100105111010000017000 A                                                           2
10100105424010000038000 S                                                           2
10100105426020000018000                                                             2
10100105431010000000030                                                             2
10100105421010000001000                                                             1
1010010674256000000                                                                 2
10100106111010000002000 A                                                           2
10100106424010000038000 S                                                           2
10100106426020000006000                                                             2
10100106431010000000200                                                             2
10100106421010000010000                                                             1
1010019974256000000                                                                 2
10100199111010000017000 A                                                           2
10100199424010000038000 S                                                           2
10100199426020000018000                                                             2
10100199431010000000030                                                             2
10100199421010000001000                                                             1
1010020174256000000                                                                 2
10100201111010000013000 A                                                           2
10100201424010000038000 S
```

```
50300506111010001000000                                                            2
50300506424010000001000                                                            2
50300506426020000005000                                                            2
50300506431010000001000                                                            2
50390004742560000000                                                               1
50390005742560000000                                                               1
50390006742560000000                                                               1
50390007742560000000                                                               1
50390010742560000000                                                               1
50390097742560000000                                                               1
50390098742560000000                                                               1
50390099742560000000                                                               1
```

```
//PWRTEST2 JOB RTI.C44.PO2154,'EI3/P&R',T=4,PRTY=0,FORMS=WHITE,M=250,
// M=0
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CDMS.JCL
//*
//*  TEST # 2      CONVERT NEDS FORMAT TRANSACTIONS AND MERGE THEM
//*         WITH EIS/P&R TRANSACTIONS
//*
//SCRATCH EXEC PGM=IEFBR14
//DD2  DD  UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PU2154.MCMASTER.PWR.DATA.PR102676
//YD2 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PU2154.MCMASTER.PWR.DATA.SOURCE
//TEST2A  EXEC PWRCNVRT
//*
//* CONVERT NEDS POINT SOURCE TRANSACTIONS TO EI3/P&R FORMAT
//*
//CONVERT.INPUT  DD  *
191280067002504801572WATT POWER CO.                                D.B. DUCK  PF    AP1
19128006700250172000000000000000000300611803050649675 0000                          AP2
191280067002501720201001000006000006000006000006000098000000000000000               AP3
1912800670025017224222826247500000000000000000000000000000000000000033000000        AP4
1912800670025017200000000000000000000000000000000000000 0000000000                  AP5
191280067002501722020020000497300         30009100020                      B2       AP6
191280067006012601572SHUCKING POWER CO.                            E.E.ELECTRICF    AP1
19128006700600172000000000000000000128076032001830000000                            AP2
1912800670060017200572009000060000060000060000060000650000000000000                 AP3
191280067006001720022552324745000000000000000000000000000000000000033000000         AP4
1912800670060017200000000000000000000000000000000000000 0000000000                  AP5
191280067006001722020020100069320         31510500023                      B2       AP6
191280067006001722020060100001354         63400000999                      B2       AP6
191280067006012601572SHOCKING POWER CO.                            E.E.ELECTRICF    AP1
19128006700600272000000000000000000106050065000960270000                            AP2
1912800670060027200128060000060000060000060000060000000000000000000                 AP3
19128006700600272040055412470400000000000000000000900000010000000000000000          AP4
1912800670060027200000000000000000000000000000000000000 0000000000                  AP5
191280067006002725010050100000013         00300000140                      B2       AP6
191280067006002725010060100000044         00000000999                      B2       AP6
191280067006012601572SHUCKING POWER CO.                            E.E.ELECTRICF    AP1
19128006700600572000000000000000000100070034000791610000                            AP2
1912800670060057200240060000060000060000060000060000000000000000000                 AP3
191280067006005720014374924723000000000000000000000000000000000000033000000         AP4
1912800670060057200000000000000000000000000000000000000 0000000000                  AP5
191280067006005722020020100012997         31510500023                      B2       AP6
191280067006005722020060100000278         63400000999                      B2       AP6
191280067006012601572SHOCKING POWER CO.                            E.E.ELECTRICF    AP1
19128006700600972495302000000000001060500650004960270000                            AP2
1912800670060097200000600000600000600000600006000000000000000000000                 AP3
191280067006009720400554124704000000000000000000000000000000000000003341215 0       AP4
1912800670060097200000000002000000500000400000000003004/209/209302   1   2    3 AP5
1912800670060097 2                                                                  AP6
191280069002018801572SUPERMAN CONCRETE CO.                         B.Z.KARACHIV     AP1
```

```
193120092027501720000306000006000006000006000006000000000000000000      AP3
19312009202750172252525251271600000000000000000000000000000000000990    AP4
193120092027501720000000000000000000000000000000000000 000000000       AP5
1931200920275017200006000000001         6340000100                 B2   AP6
1931200921401000015720LLUTION INC                          I.O.EMISSIONP   AP1
19312009214011072000099000000000000000000005000075000000               AP2
193120092140110720000000700006000000600000600000     900000000000      AP3
1931200921401107225252525000470000080000000000000000000000       2000 000    AP4
19312009214011072000000000000000000000000000000        000000000       AP5
1931200921401107250200000011778677860000000000000000BELTS ON GALLERY    P2   AP6
19312009216000000015720LLUTION INC                          I.O.EMISSIONP   AP1
1931200921600117200009900000000000000000000000000000050                AP2
19312009216001172000000600000600000200000600000060000000000000000000   AP3
193120092160011722525252500047000000000000000000000000000000000000003333000   AP4
19312009216001172000000000000000000000000000000000000 0000000000      AP5
1931200921600117250100000002355735570000000000000000ELEV SHIPPING FACIL P2   AP6
19312009216000000015720LLUTION INC                          I.O.EMISSIONP   AP1
1931200921600127200009900000000000000000000000000000000               AP2
19312009216001272000000180000600000600000600000060000999000000000000000   AP3
1931200921600127225252525247440000000000000000000002599200000000000000000000000   AP4
19312009216001272000000000000000000000000000000000000 0000000000      AP5
19312009216001272730000000017213721300000000000000000HEAT MILLING       P2   AP5
19312009216000000015720LLUTION INC                          I.O.EMISSIONP   AP1
19312009216001372000099000000000000151000050001350000000              AP2
19312009216001372000000070000600000600000600000060000900000000000000000   AP3
19312009216001372252525250004700002500000000000375000000000000000000020200000   AP3
1931200921600137200002500000000000375000000000000000017208730531 0   1   2   3 AP5
193120092160013 72                                                    AP5
193120092160013 72                                                    AP5
//CONVERT.OUTPUT  DD UNIT=3330,
//  VOL=SER=MTI111,
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(5,1)),
//  DSN=NEDS.POINT
//TEST28  EXEC PNRDCONV
//*
//* CONVERT NEDS AREA SOURCE TRANSACTIONS TO EIS/P&R FORMAT
//*
//CONVERT.PNRNEDS  DD *
19312009273                       15210913121152                    76500     AA1
19312009212300321505675 0         012350023450    54325                       AA2
193120092234500543 50                                    32100         1234 2AA3
193120092          45670                       34500                          AA4
193120092            05430                                                    AA5
193120092AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATAGORIES            AA6
19312010573                       18231216152135          12350    63050      AA1
193120105        257500125034 50              765045675    56750              AA2
193120105                 123500                           12300       21002AA3
193120105                                               005400234500          AA4
193120105                                               2100                  AA5
193120105AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATAGORIES            AA6
19128008973                       20231115113125985 0     79500    67800      AA1
191280089    67875          6650  0997500090505650456 0032100         3450    AA2
```

```
191280089      500502350      009950      543210065400      56750        23452AA3
191280089    00500054300    5675                 70750           234500       AA4
191280089            09850                 010900250         1500             AA5
191280089AREA SOURCE TEST - SOME, BUT NOT ALL VALUES IN EACH CATAGORY         AA6
19128006773                           1012020402303401230200100975089002355000050AA1
1912800672350034750421000039087500509875012340098502150000980569000252350     AA2
191280067234500321500432500980000097501216002345002155000975295000500085012502AA3
19128006723501235054325007575000025000500123503210000097500005032150000985750 AA4
1912800670000050001000225000350000157505002195022500013001230005450190        AA5
191280067AREA SOURCE TEST - VALUE IN EACH SOURCE/QUANITY/PERCENT FIELD        AA6
//CONVERT.PNRTRANS  DD UNIT=SYSDA,
//              DISP=(NEW,PASS),
//              SPACE=(TRK,(10,5)),
//              DSNAME=&&AREA
//TEST2C   EXEC PNRTRNMG
//*
//*  MERGE TANSACTIONS
//*
//MERGE.FILE1 DD DSN=&&AREA,UNIT=SYSDA,DISP=(OLD,DELETE)
//MERGE.FILE2 DD DSN=NEDS.POINT,DISP=(OLD,UNCATLG)
//MERGE.OUTFILE DD DSN=&&AREA1,
//              UNIT=SYSDA,
//              DISP=(NEW,PASS),
//              SPACE=(TRK,(10,5))
//TEST2   EXEC   PGM=IEFBR14
//D DD DSN=NEDS.POINT,UNIT=DISK,VOL=(SER=(RTI111,RTI222)),
// DISP=(OLD,DELETE)
//TEST2D  EXEC PNRTRNMG
//MERGE.FILE1 DD DSN=&&AREA1,UNIT=SYSDA,DISP=(OLD,DELETE)
//MERGE.FILE2 DD *
191280067001072000                    188015F9.Z. LIGHT T                          01A
1912800670010720001OWA GAS AND LIGHT CO.                                           02A
191280067001072000                                                                 03A
191280067001072000101   000000000000000               0000653524703001490000      11A
19128006700107200001015008003500000000       0000 0000000000                       12A
191280067001072000011101        008000850000000          0000000 3                 13A
191280067001072000142401        060000000000117          0000000 3                 13A
191280067001072000142602        060000000000000          0000000 0                 13A
191280067001072000143101        060000000000600          0000000 0                 13A
191280067001072000142101        060000000000000          0000000 0                 13A
191280067001072000010120400101       0001496       39215200020                     21A
19128006700107200001012B                         T                                 22A
191280067001072000101                                                              23A
191280067001072000010220400601       0000019       6340000100 0                    21A
19128006700107200001022B                         T                                 22A
191280067001072000102                                                              23A
191280067001072000202   000000000000000               0018235924704001520000      11A
19128006700107200002015008003500000000       0000 0000000000                       12A
191280067001072000211101        008000850000000          0000000 0                 13A
191280067001072000242401        060000000000137          0000000 3                 13A
191280067001072000242602        060000000000000          0000000 0                 13A
191280067001072000243101        060000000000000          0000000 0                 13A
191280067001072000242101        060000000000000          0000000 0                 13A
```

```
1931201050460720008Y-PASS CHEMICALS INC                                                       02A
193120105046072000                                                                            03A
1931201050460720000101   281900000000000          252525252475000581000   11A
19312010504607200001005002704750016567     0000 0000000000                12A
1931201050460720000111101       060000000000000031       0000000 0        13A
1931201050460720000142401       060000000000000006       0000000 0        13A
1931201050460720000142602       060000000000000298       0000000 0        13A
1931201050460720000143101       060000000000000068       0000000 0        13A
1931201050460720000142101       060000000000000001       0000000 0        13A
193120105046072000010160200600       0003400        6340000900            21A
193120105046072000010128                           T                      22A
1931201050460720000101                                                    23A
1931201050460720000202   281900000000000          252525252475000081000   11A
19312010504607200002005002704750016567     0000 0000000000                12A
1931201050460720000211101       060000000000000004       0000000 0        13A
1931201050460720000242401       060000000000000000       0000000 0        13A
1931201050460720000242602       060000000000000041       0000000 0        13A
1931201050460720000243101       060000000000000009       0000000 0        13A
1931201050460720000242101       060000000000000000       0000000 0        13A
193120105046072000020160200600       0000467        6340000900            21A
193120105046072000020128                           T                      22A
1931201050460720000201                                                    23A
1931201050460720000303   281903000000000          252525252475000000000   11A
19312010504607200003005003304200050000     0000 0000000000                12A
1931201050460720000311101       060000000000000100       0000000 3        13A
1931201050460720000342401       060000000000000100       0000000 3        13A
1931201050460720000342602       019000000000000100       0000000 3        13A
1931201050460720000343101       060000000000000100       0000000 3        13A
1931201050460720000342101       060000000000000100       0000000 3        13A
193120105046072000030102000000       002840084000000000000000             21A
19312010504607200003012P                           T                      22A
1931201050460720000301                                                    23A
1931201050460720000909   281904000000000          252525252475000000000   11A
19312010504607200009012739301400218347     0000 0000000000                12A
1931201050460720000911101       060000000000000054       0000000 2        13A
1931201050460720000942401       060000000000000000       0000000 0        13A
1931201050460720000942602       060000000000000000       0000000 0        13A
1931201050460720000943101       060000000000000000       0000000 0        13A
1931201050460720000942101       060000000000000000       0000000 0        13A
193120105046072000090170200000       001428650000000000000000             21A
193120105046072000090 12PUREA PRILL TOWER          T                      22A
1931201050460720000901                                                    23A
193120105046072000090270200000       001428650000000000000000             21A
193120105046072000090 22PUREA PRILL TOWER          T                      22A
1931201050460720000902                                                    23A
//MERGE.OUTFILE DD DSN=&&AREA2,
//             UNIT=SYSDA,
//             DISP=(NEW,PASS),
//             SPACE=(TRK,(10,5))
//TEST2E  EXEC PNRISORT
//*
//* ENSURE THAT TRANSACTIONS ARE SORTED CORRECTLY
//*
```

```
//SORT.PWRINPUT  DD DSNAME=&&AREA2,
//             DISP=(OLD,DELETE)
//SORT.OUTPUT  DD UNIT=DISK,
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(10,5)),
//  VOL=SER=RTI111,DSN=RTI.C44.P02154.MCMASTER.PWR.DATA.SOURCE
```

```
//PNRTEST3 JOB RTI.C44.PO2154,'EIS/P&R',T=3,PRTY=0,FORMS=WHITE,P=250,
// COPIES=3
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*    TEST 3  -   INSERT EMISSION FACTORS INTO TRANSACTIONS CREATED IN TEST 2
//*      THEN CREATE INTIAL EISP&R MASTER FILE
//*
//TEST3A  EXEC PNRKEFIN
//*
//* INSERT EMISSION FACTOR INFORMATION
//*
//INSERT.INPUT  DD DISP=OLD,UNIT=DISK,
//   VOL=SER=RTI111,DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.SOURCE
//INSERT.OUTPUT  DD UNIT=SYSDA,
//               DISP=(NEW,PASS),
//               SPACE=(TRK,(10,5)),
//               DSNAME=&&TRANS
//TEST3B  EXEC PNRFUPDT,
//               NEWMSTR=PR102676
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.PNROLDMS DD DUMMY
//UPDATE.INPUT  DD DSNAME=&&TRANS,
//               DISP=(OLD,DELETE)
```

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```
//PNRTEST4 JOB RTI.C44.PU2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
// COPIES=3
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CDHS.JCL
//*
//*
//* TEST RUN 4 - NEDS SOURCE DATA REPORT
//*
//TEST4A  EXEC PNRHREPT
//*
//* PRINT NEDS AREA SOURCE DATA
//*
//REPORT.PNRNEDS  DD *
19312009273                        15210913121152                   76500    AA1
193120092123003215056750           012350023450    54325                     AA2
19312009223450054350                                       32100        12342AA3
193120092         45670                       34500                          AA4
193120092            05430                                                   AA5
193120092AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATAGORIES           AA6
19312010573                        18231216152185         12350     63050    AA1
193120105          25750012503450                 765045675     56750        AA2
193120105                     123500                     12300          21002AA3
193120105                                                005400234500        AA4
193120105                                                2100                AA5
193120105AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATAGORIES           AA6
19128006973                        202311151131259850     79500     67800    AA1
191280089     67875        8650  099750009050565045600032100      3450       AA2
191280089      500502350      009950      543210065400     56750        23452AA3
191280089    0050054300   5675                70750           234500         AA4
191280089           09850                010900250       1500                AA5
191280089AREA SOURCE TEST - SOME, BUT NOT ALL VALUES IN EACH CATAGORY        AA6
19128006773                        1012020402303401230200100975089002355000050AA1
1912800672350034750421000039087500509875012340098502150000980569000252350    AA2
19128006723450032150432500980000097501210002345002155000975295000500085012502AA3
191280067235012350543250075750000250005001235032100009750000503215000098750  AA4
1912800670000050001000225000350000157505002195022500013001230005450190       AA5
191280067AREA SOURCE TEST - VALUE IN EACH SOURCE/QUANITY/PERCENT FIELD       AA6
```

```
//PNRTEST5 JOB RTI.C44.P02154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
// COPIES=3
//*PROCLIB=RTI.C44.P02154.MCMASTER.COMS.JCL
//*
//*  TEST 5  PRINT THE CURRENT EIS/P&R MASTER FILE
//*
//TEST5C  EXEC PNRPREPT,
//               MSTRFIL=PR102676
//*  TEST 5 PRINT THE EIS/P&R MASTER FILE
```

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```
//PNRTEST6 JOB RTI.C44.P02154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.P02154.MCMASTER.CDMS.JCL
//*
//* TEST RUN 6 - FILE MAINTENANCE
//*
//SCRATCH EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.P02154.MCMASTER.PNR.DATA.PR102776
//TEST6A  EXEC PNRISORT
//*
//* ENSURE THAT TRANSACTIONS ARE SORTED CORRECTLY
//*
//SORT.INPUT  DD  *
191280067001072000                 188015FB.Z. LIGHT     9195498311ELECT.&GAS01C
191280067001072000IOWA GAS AND LIGHT CO. 56TH ST. AMES, IOWA 500100800      02C
191280067001072000P.O.BOX 12194 AMES, IOWA 50010                             03C
1912800670010720000101   000000400004000              000065352470300149000  11C
19128006700107200001015008003500000000      0000 00000000                    12C
1912800670010720000111101       0080008500000000        0000000 3            13C
1912800670010720000142401       0600000000000117        0000000 3            13C
1912800670010720000142602       0600000000000000        0000000 0            13C
1912800670010720000143101       0600000000000000        0000000 0            13C
1912800670010720000142101       0600000000000000        0000000 0            13C
191280067001072000010120400101      0001496       39215200020                21C
191280067001072000010128                                                     22C
1912800670010720000101                                                       23C
191280067001072000010220400601      0000019       63400001000                21C
191280067001072000010228                                                     22C
1912800670010720000102                                                       23C
1912800670025730510111101                               0000007              13C
1912800670025730510142602                        0010101                     13C
19128006700607305102  777                                                    11C
1912800670060730510510424010000005000A                                       23C
191280089005073051                         LUIS LANE                         01C
191280089005073051METROPOLIS, U.S.A.                               0010      02C
1912800890050730510110        44444                                          21C
//SORT.OUTPUT  DD UNIT=SYSDA,
//             DISP=(NEW,PASS),
//             SPACE=(TRK,(5,1)),
//             DSNAME=&&TRANS
//TEST6B  EXEC PNRFUPDT,
//             OLDMSTR=PR102676,
//             NEWMSTR=PR102776
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.INPUT  DD DSNAME=&&TRANS,
//             DISP=(OLD,DELETE)
```

```
//PNRTEST7 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//*  TEST RUN 7 - FILE MAINTENANCE
//*
//SCRATCH EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PR102876
//TEST7A  EXEC PNRISORT
//*
//* ENSURE THAT TRANSACTIONS ARE SORTED CORRECTLY
//*
//SORT.INPUT  DD  *
19128006700607305105
1931200100465                                                                      110
1931200921600     1105                                                             010
//SORT.OUTPUT  DD UNIT=SYSDA,                                                      210
//             DISP=(NEW,PASS),
//             SPACE=(TRK,(5,1)),
//             DSNAME=&&TRANS
//TEST7B  EXEC PNRFUPDT,
//             OLDMSTR=PR102776,
//             NEWMSTR=PR102876
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.INPUT  DD DSNAME=&&TRANS,
//             DISP=(OLD,DELETE)
```

```
//PNRTEST8 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* TEST RUN 8 - FILE MAINTENANCE
//*
//SCRATCH EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.NEWEF
//DD2 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PR102AV2
//DD3 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
// DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.NEWEFTBL
//TEST8A  EXEC PNRTBGEN,
//             EFTABLE=NEWEFTBL
//*
//* GENERATE NEW EMISSION FACTORS TABLE
//*
//GENERATE.INPUT  DD  *
0000060073000000634                                                        1
0000060011101    100000US                                                  2
0000060042401    200000US                                                  2
0000060042602    300000US                                                  2
0000060043101    400000US                                                  2
0000060042101    500000US                                                  2
2010000073002000000                                                        1
2010000011101    100000U                                                   2
2010000042401    200000U                                                   2
2010000042602    300000U                                                   2
2010000043101    400000U                                                   2
2010000042101    500000U                                                   2
2010020173002102029                                                        1
2010020111101    100000US                                                  2
2010020142401    200000US                                                  2
2010020142602    300000US                                                  2
2010020143101    400000US                                                  2
2010020142101    500000US                                                  2
2010060173002000634                                                        1
2010060111101    100000US                                                  2
2010060142401    200000US                                                  2
2010060142602    300000US                                                  2
2010060143101    400000US                                                  2
2010060142101    500000US                                                  2
2020020073064091300                                                        1
20200200111010001500000UA                                                  2
20200200424010002500000UA                                                  2
202002004260200035000000U                                                  2
202002004310100045000000U                                                  2
202002004210100055000000U                                                  2
2020020173002105315                                                        1
2020020211101    100000US                                                  2
```

```
9120710042401000200000US                                                       2
9120710042401000200000US                                                       2
91207200730090222222                                                           1
9120720042401000200000US                                                       2
9120720042401000200000US                                                       2
91207300730090222222                                                           1
9120730042401000200000US                                                       2
9120730042401000200000US                                                       2
9120740073009033333                                                            1
9120740042401000200000US                                                       2
9130810073009033333                                                            1
9130810042401000200000US                                                       2
9130810011101000100000UA                                                       2
9130820073009033333                                                            1
9130820042401000200000US                                                       2
9130820011101000100000UA                                                       2
9130830073009033333                                                            1
9130830042401000200000US                                                       2
9130830011101000100000UA                                                       2
9130840073009033333                                                            1
9130840011101000100000UA                                                       2
9130840011101000100000UA                                                       2
9130850011101000100000UA                                                       2
9130850011101000100000UA                                                       2
//TESTBB  EXEC PNREFUPD,
//             MSTRFIL=PR102876,
//             EFTABLE=NEWEFTBL,
//             TRANS=NEWEF
//*
//* GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
//*
//EFUPDATE.INPUT  DD  *
73001 A
//TESTBC  EXEC PNRFUPDT,
//             OLDMSTR=PR102876,
//             NEWMSTR=PR1028V2
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.INPUT  DD DSNAME=RTI.C44.P02154.MCMASTER.PNR.DATA.NEWEF,
//             DISP=(OLD,DELETE)
```

```
//PNRTEST9 JOB RTI.C44,P02154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44,P02154,MCMASTER.CDMS.JCL
//KILL  EXEC PGM=IEFBR14
//D01 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44,P02154,MCMASTER,PNR,DATA,POLRETRV
//TEST9A  EXEC PNRRETVR,
//             MSTRFIL=PR1028V2,
//             PARAM='SIZE=94K,BUF=10K,NOSEQ,SUPMAP',
//             ANSWRFL=POLRETRV,
//             SERIAL=RTI111,
//             DISP='NEW,CATLG,DELETE'
//*
//* RETRIEVE ON COUNTY AND POLLUTANT-ID
//*
//COMPILE.INPUT  DD  *
$$SELECT                                                                00000100
(COUNTY                            = '2280'                          OR 00000200
COUNTY                             = '3120')                        AND 00000300
POLLUTANT-ID                       = POLLUTANT-ID                   AND 00000400
(POLLUTANT-ID                      = '42401'                         OR 00000500
POLLUTANT-ID                       = '11101')                           00000600
$$END                                                                   00000700
```

```
//PNRTST10 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44,PO2154.MCMASTER.COMS.JCL
//*
//*
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PRRETR1
//TEST10A EXEC PNRSORTR,
//             MSTRFIL=POLRETRV,
//             SORTFIL=PRRETR1,
//             SERIAL=RTI111,
//             DISP='NEW,CATLG,DELETE'
//*
//* SORT MASTER FILE ON AQCR, PLANT-ID AND POLLUTANT-ID
//*
//COMPILE.INPUT  DD  *
$$SORT                                                      00000100
POLLUTANT-ID                        A                       00000400
AQCR                                A                       00000200
$$END                                                       00000500
```

```
//PNRTST11 JOB RTI.C44.P02154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.P02154.MCMASTER.CDMS.JCL
//CRD2DISK EXEC PGM=IEBGENER,
//               REGION=60K,
//               TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT2    DD UNIT=SYSDA,
//               DISP=(NEW,PASS),
//               SPACE=(TRK,(1,1)),
//               DSNAME=&&INPUT,
//               DCB=(RECFM=FB,LRECL=80,BLKSIZE=1680)
//SYSIN     DD DUMMY
//SYSUT1    DD *
          MOVE MSTR-POLLUTION-ID (EM-SET-INDEX) TO BREAK-TWO.
          MOVE MSTR-AQCR TO BREAK-ONE.
//TEST11  EXEC PNRBREPT,
//               MSTRFIL=PRMETR1
//*
//* PRINT SUMMARY REPORT FROM ANSWER FILE
//*
//COMPILE.INPUT  DD  DISP=(OLD,PASS),UNIT=SYSDA,DSN=&&INPUT
//SUMMARY.INPUT  DD  *
OP1  CDMS WORKSHOP DEMONSTRATION      SUM OF POLLUTANTS WITHIN AQCR   10/28/76
OP2  EIS/P&R WORKSHOP                 MR. LARRY MCMASTER,RTI
OP3                                                 POLL.   ID
OP4  AQCR
```

```
//PNRTST12 JOB RTI.C44.PO2154,'EIS/P&R',T=4,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.COMS.JCL
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.POLRETR2
//TEST12  EXEC PNRRETVR,
//              MSTRFIL=PR1028V2,
//              ANSWRFL=POLRETR2,
//              SERIAL=RTI111,
//              DISP='NEW,CATLG,DELETE'
//*
//* RETRIEVE ON POLLUTANT-ID
//*
//COMPILE.INPUT  DD  *                                                00000100
$$SELECT                                                          OR  00000200
POLLUTANT-ID                          = '42401'                   OR  00000300
POLLUTANT-ID                          = '11101'                       00000400
POLLUTANT-ID                          = '43101'                       00000500
$$END
```

```
//PNRTST13 JOB RTI.C44.PO2154,'EIS/P&R',T=4,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.COMS.JCL
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PRRETR2
//TEST13  EXEC PNRSORTR,
//              MSTRFIL=POLRETR2,
//              SORTFIL=PRRETR2,
//              SERIAL=RTI111,
//              DISP='NEW,CATLG,DELETE'
//*
//* SORT ANSWER FILE ON POLLUTANT-ID, AGCR, COUNTY AND PLANT-ID
//*
//COMPILE.INPUT  DD  *
$$SORT                                                                  00000100
POLLUTANT-ID                        A                                   00000200
$$END                                                                   00000600
```

```
//PNRTST14 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//CRD2DISK EXEC PGM=IEBGENER,
 /              REGION=60K,
//              TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT2    DD UNIT=SYSDA,
//              DISP=(NEW,PASS),
//              SPACE=(TRK,(1,1)),
//              DSNAME=&&INPUT,
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=1680)
//SYSIN     DD DUMMY
//SYSUT1    DD *
           MOVE MSTR-POLLUTION-ID (EM-SET-INDEX) TO BREAK-ONE.
//TEST14  EXEC PNRBREPT,
//              MSTRFIL=PRRETR2
//*
//* PRINT SUMMARY REPORT FROM ANSWER FILE
//*
//COMPILE.INPUT  DD  DISP=(OLD,PASS),UNIT=SYSDA,DSN=&&INPUT
//SUMMARY.INPUT  DD  *
OP1  CDMS WORKSHOP DEMONSTRATION      SUM BY POLLUTANT                  10/28/76
OP2  EIS/P&R WORKSHOP DEMONSTRATION  MR. LARRY MCMASTER,RTI
OP3
OP4  POLL.   ID
```

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```
//PNRTST15 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
//  M=1
//*PROCLIB=RTI.C44.PO2154.MCMASTER.COMS.JCL
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.POLRETR3
//*
//* TEST RUN 15- RETRIEVAL
//*
//TEST15  EXEC PNRRETVR,
//              MSTRFIL=PR102AV2,
//              ANSWRFL=POLRETR3,
//              SERIAL=RTI111,
//              DISP='NEW,CATLG,DELETE'
//*
//* RETRIEVE ON POLLUTANT-ID USING COPIED MEMBER
//*
//COMPILE.INPUT  DD  *                                                  00000100
$$SELECT USER  IFTEST01                                                 00000200
$$END
```

```
//PWRTST16 JOB RTI.C44.PO2154,'EIS/P&R',T=4,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//KILL  EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PWR.DATA.PWRETH3
//TEST16  EXEC PWRSORTH,
//              MSTRFIL=POLRETH3,
//              SORTFIL=PWRETH3,
//              SERIAL=RTI111,
//              DISP='NEW,CATLG,DELETE'
//*
//* SORT ANSWER FILE ON POLLUTANT-ID, AQCR, COUNTY AND PLANT-ID
//*
//COMPILE.INPUT  DD  *
$$SORT                                                                   00000100
POLLUTANT-ID                          A                                  00000200
AQCR                                  D                                  00000300
COUNTY                                D                                  00000400
PLANT-ID                              D                                  00000500
$$END                                                                    00000600
```

```
//PNRTST17 JOB RTI.C44.P02154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
//   M=1
//*PROCLIB=RTI.C44.P02154.MCMASTER.CDMS.JCL
//CRD2DISK EXEC PGM=IEBGENER,
//                REGION=60K,
//                TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT2    DD UNIT=SYSDA,
//                DISP=(NEW,PASS),
//                SPACE=(TRK,(1,1)),
//                DSNAME=&&INPUT,
//                DCB=(RECFM=FB,LRECL=80,BLKSIZE=1680)
//SYSIN     DD DUMMY
//SYSUT1    DD *
          MOVE MSTR-POLLUTION-ID (EM-SET-INDEX) TO BREAK-ONE.
//TEST17  EXEC PNRBREPT,
//                MSTRFIL=PNRETR3
//*
//* PRINT SUMMARY REPORT FROM ANSWER FILE
//*
//COMPILE.INPUT  DD  DISP=(OLD,PASS),UNIT=SYSDA,DSN=&&INPUT
//SUMMARY.INPUT  DD  *
OP1  CDMS WORKSHOP DEMONSTRATION     SUM BY POLLUTANT                  10/28/76
OP2  EI/P&R WROKSHOP                 MR. LARRY MCMASTER,RTI
OP3
OP4  POLL.   ID
```

```
//PNRTST18 JOB RTI.C44.PO2154,'EIS/P&R',T=3,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDHS.JCL
//*
//* TEST RUN 18 - RETRIEVAL
//*
//TEST18A EXEC PNRRETVR,
//             PARAM='SIZE=94K,BUF=10K,NOSEQ,SUPMAP',
//             MSTRFIL=PR1028V2,
//             ANSWRFL=SOURCE
//*
//* RETRIEVE ALL AREA SOURCE DATA FROM EIS/P&R MASTER FILE
//*
//COMPILE.INPUT  DD  *                                                  00000100
$$SELECT                                                                00000200
USER-PLANT-ID                     = 'AREA SOURCE'                       00000300
$$END
//TEST18B EXEC PNRANCNV,
//             MSTRFIL=SOURCE,
//             NEDSOUT=A
//*
//* CONVERT ANSWER FILE TO NEDS AREA SOURCE FORMAT
//*
//CONVERT.PNRNEDS  DD UNIT=3330,
//             VOLUME=(PRIVATE,RETAIN,SER=RTI111),
//             DISP=(NEW,PASS,DELETE),
//             SPACE=(TRK,(5,1),RLSE),
//             DSNAME=RTI.C44.PO2154.MCMASTER.PNR.DATA.AREA
//CONVERT.INPUT  DD *
A
//TEST18C EXEC PNRRREPT
//*
//* PRINT NEDS AREA SOURCE RECORDS
//*
//REPORT.PNRNEDS  DD DSNAME=RTI.C44.PO2154.MCMASTER.PNR.DATA.AREA,
//             VOLUME=(PRIVATE,RETAIN,SER=RTI111),
//             DISP=(OLD,DELETE),
//             UNIT=DISK
```

```
//PNRTST19 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
//  M=1
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* TEST RUN 19 - RETRIEVAL
//*
//TEST19A EXEC PNRRETVR,
//             MSTRFIL=PR1028V2,
//             ANSWRFL=SOURCE2
//*
//* RETRIEVE ALL POINT SOURCE DATA FROM EIS/P&R MASTER FILE.
//*
//COMPILE.INPUT  DD  *                                                  00000100
$$SELECT                                                                00000200
USER-PLANT-ID                  N = 'AREA SOURCE'
//TEST19B EXEC PNRNCONV,
//             MSTRFIL=SOURCE2,
//             NEDSOUT=A
//*
//* CONVERT ANSWER FILE TO NEDS POINT SOURCE FORMAT
//*
```

```
//PNRTST20 JOB RTI.C44.PO2154,'EIS/P&R',T=7,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDHS.JCL
//*
//* AD HOC RUN 20
//*
//STEP1    EXEC PNRRETVR,
//              MSTRFIL=PR1028V2,
//              ANSWRFL=ADHOCR20
//*
//* RETRIEVE ON POLLUTANT-ID
//*
//COMPILE.INPUT DD *
$$SELECT
POLLUTANT-ID                              = POLLUTANT-ID
$$END
//STEP2    EXEC PNRSORTR,
//              MSTRFIL=ADHOCR20,
//              SORTFIL=ADHOCS20
//*
//* SORT MASTER FILE ON STATE  COUNTY, AQCR, PLANT-ID AND POLLUTANT-ID
//*
//COMPILE.INPUT  DD *
$$SORT
STATE                                         A
COUNTY                                        A
AQCR                                          A
PLANT-ID                                      A
POLLUTANT-ID                                  A
$$END
//CR02DISK  EXEC PGM=IEBGENER,
//              REGION=60K,
//              TIME=(1,0)
//SYSPRINT  DD SYSOUT=A
//SYSUT2    DD UNIT=SYSDA,
//              DISP=(NEW,PASS),
//              SPACE=(TRK,(1,1)),
//              DSNAME=&&INPUT,
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=1680)
//SYSIN     DD DUMMY
//SYSUT1    DD *
           MOVE MSTR-POLLUTION-ID (EM-SET-INDEX) TO BREAK-ONE.
           MOVE MSTR-PLANT-ID TO BREAK-TWO.
           MOVE MSTR-AQCR TO BREAK-THREE.
           MOVE MSTR-COUNTY TO BREAK-FOUR.
           MOVE MSTR-STATE TO BREAK-FIVE.
//STEP3    EXEC PNRBREPT,
//              MSTRFIL=ADHOCS20
//*
//* PRODUCE SUMMARY REPORT
//*
//COMPILE.INPUT  DD DSNAME=&&INPUT,
//              DISP=(OLD,DELETE),
//              UNIT=SYSDA
```

```
//SUMMARY.INPUT DD *
OP1  CDHS WORKSHOP DEMONSTRATION     SUM BY POLLUTANT-PLANT            10/28/76
OP2  EIS/P&R WORKSHOP DEMONSTRATION  MR. LARRY MCMASTER,RTI
OP3  STATE          COUNTY           AQCR              PLANT
OP4  POLL-ID.
```

```
//PNRTST21 JOB RTI.C44.PO2154,'EIS/P&R',T=2,PRTY=0,FORMS=WHITE,P=250,
//  M=1
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* AD HOC RUN 21
//*
//SCRATCH EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PR110176
//STEP1   EXEC PNRFUPDT,
//              OLDMSTR=PR1026V2,
//              NEWMSTR=PR110176
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.INPUT  DD *
191280067002573025                                                       01C
19128006700607302501                                                     11C
19228008900257302501                                                     11C
19228008900757302501                                                     11C
//STEP2   EXEC PNRRETVR,
//              MSTRFIL=PR110176,
//              ANSWRFL=ADHOC21
//*
//* RETRIEVE ALL POINT SOURCE DATA SINCE 01/01/73
//*
//COMPILE.INPUT DD *
$$SELECT
USER-PLANT-ID                  N = 'AREA SOURCE'               AND
DATE-OF-0-RECORD                 > '73001'                     OR
DATE-OF-1-RECORD                 > '73001'
$$END
//STEP3   EXEC PNRCONV,
//              MSTRFIL=ADHOC21,
//              NEDSOUT=A
//*
//* CONVERT ANSWER FILE TO NEDS POINT SOURCE RECORDS
//*
```

```
//PNRTST22 JOB RTI.C44.PO2154,'EIS/PER',T=4,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* TEST RUN 22 - FILE MAINTENANCE
//*
//SCRATCH EXEC PGM=IEFBR14
//DD1 DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PR1101V2
//TEST22A EXEC PNRISORT
//*
//* ENSURE THAT TRANSACTIONS ARE SORTED CORRECTLY
//*
//SORT.INPUT  DD  *
1912800670025742000101001L                                       ENVIRONMENTA30A
1912800670025742000101001RL PROTECTION                                      30A
1912800670025742000101002L                                                AGE30A
1912800670025742000101002RNCY                                               30A
1912800670025742000101003L                                           (40 CFR,30A
1912800670025742000101003R PART 60)                                         30A
1912800670025742000101004L                                   STANDARDS OF PER30A
1912800670025742000101004RFORMANCE FOR NEW                                  30A
1912800670025742000101005L                                          STATIONAR30A
1912800670025742000101005RY SOURCES                                         30A
1912800670025742000101006L                                  PROPOSED STANDARD30A
1912800670025742000101006RS FOR SEVEN SOURCE                                30A
1912800670025742000101007L                                              CATEG30A
1912800670025742000101007RORIES                                             30A
1912800670025742000101008L                                                  30A
1912800670025742000101008R                                       MAY 4, 1973.30A
1912800670025742000101009L  PURSUANT TO SECTION 111 OF THE CLEAN AIR ACT, THE30A
1912800670025742000101009RADMINISTRATOR PROPOSES HEREIN STANDARDS OF        30A
1912800670025742000101010LPERFORMANCE FOR NEW AND MODIFIED SOURCES WITHIN SEV30A
1912800670025742000101010REN CATEGORIES OF STATIONARY SOURCES: ASPHALT       30A
1912800670025742000101011LCONCRETE PLANTS, PETROLEUM REFINERIES, STORAGE VESS30A
1912800670025742000101011RELS FOR PETROLEUM LIQUIDS, SECONDARY LEAD SMELTERS,30A
1912800670025742000101012LSECONDARY BRASS AND BRONZE INGOT PRODUCTION PLANTS,30A
1912800670025742000101012R AND SEWAGE TREATMENT PLANTS. THE ADMINISTRATOR    30A
1912800670025742000101013LALSO PROPOSES AMENDMENTS TO THE GENERAL PROVISIONS 30A
1912800670025742000101013ROF 40 CFR, PART 60, PUBLISHED ON DECEMBER 23, 1971 30A
1912800670025742000101014L(36 FR 24876), AND TO THE APPENDIX, ''TEST METHODS,30A
1912800670025742000101014R'' TO THIS PART. IN A SEPARATE PUBLICATION, ON     30A
1912800670025742000101015LMAY 2, 1973 (38 FR 10820), THE ADMINISTRATOR PROPOS30A
1912800670025742000101015RED AMENDMENTS TO THE GENERAL PROVISIONS TO         30A
1912800670025742000101016LPRESCRIBE PROCEDURES FOR DEALING WITH EMISSIONS WHI30A
1912800670025742000101016RCH EXCEED STANDARDS DURING STARTUPS, SHUTDOWNS, OR 30A
1912800670025742000101017LMALFUNCTIONS. THE GENERAL PROVISIONS APPLY TO ALL S30A
1912800670025742000101017RTANDARDS OF PERFORMANCE FOR NEW OR MODIFIED        30A
1912800670025742000101018LSOURCES, BOTH THOSE STANDARDS PROMULGATED TO DATE (30A
1912800670025742000101018R36 FR 24876) AND THOSE TO BE PROMULGATED IN THE    30A
1912800670025742000101019LFUTURE.                                            30A
1912800670025742000101019R                                                   30A
1912800670025742000101020L  AS PRESCRIBED BY SECTION 111, THIS PROPOSAL OF ST30A
```

```
1912800679999742000105004LSHALL BE RETAINED FOR AT LEAST 2 YEARS FOLLOWING TH30A
1912800679999742000105004RE DATE OF SUCH MEASUREMENTS AND SUMMARIES.        30A
1912800679999742000106001L                                         TEST METHODS A30A
1912800679999742000106001RND PROCEDURES                                      30A
1912800679999742000106002L (A) THE PROVISIONS OF THIS SECTION APPLY TO THE PE30A
1912800679999742000106002RRFORMANCE TESTS FOR DETERMINING COMPLIANCE WITH THE30A
1912800679999742000106003L      STANDARD PRESCRIBED BY 60.162.               30A
1931200921401742001005001L ALLOWABLES MISSING.                               30A
1931200921401742001005004R PARAGRAPH TO BE COMPLETED                         30A
1931200921401742001099099L EMISSIONS MISSING.                                30A
1931200921401742001099996R PARAGRAGH TO BE COMPLETED                         30A
1912800670010742000101001L APPLICABILITY AND DESIGNATION OF AFFECTED FACILITY30A
1912800670011742000101001R DEFINITIONS                                       30A
1912800670011742000101002L 'ASPHALT CONCRETE PLANT'                          30A
1912800670060742000202002L **************************************************30A
1912800670060742000202002R***************************************************30A
1912800670060742000202009L   PPB-PARTS PER BILLION                           30A
1912800670060742001001002L (A) ON OR AFTER THE DATE ON WHICH THE PERFORMANCE 30A
1912800670060742001001002RTEST REQUIRED TO BE CONDUCTED BY 60.8 IS INITIATED 30A
1912800670060742001001003L      BUT NO LATER THAN 180 DAYS AFTER INITIAL START30A
1912800670060742001001003RUP.                                                30A
1912800670025742000101041RS IN TEST METHODS 10 AND 11 ARE EXPRESSED IN METRIC30C
1912800670060742000202005L   MV-MILLIVOLT                                    30C
1912800670060742000202015L   O-OXYGEN                                        30C
1912800670060742001001002L (A) ON OR AFTER THE DATE ON WHICH THE PERFORMANCE 30C
1931200921401742001099996L (A) THE OWNER OR OPERATOR OF ANY AFFECTED FACILITY30C
1931200921401742001099996R SUBJECT TO THE PROVISIONS OF THIS SUBPART SHALL   30C
1931200921401742001099997L      INSTALL,CALIBRATE, MAINTAIN, AND OPERATE     30C
1931200921401742001099997RA PHOTOELECTRIC OR OTHER TYPE SMOKE DETECTOR.      30C
191280067006000      0202005                                                 30D
191280067006000      10                                                      30D
1912800679999        0105000                                                 11D
1931200921401        1005                                                    30D
                                73061 A                                      21D
//SORT.OUTPUT  DD UNIT=SYSDA,
//              DISP=(NEW,PASS),
//              SPACE=(TRK,(5,1)),
//              DSNAME=&&TRANS
//TEST228 EXEC PWRFUPDT,
//              OLDMSTR=PR110176,
//              NEWMSTR=PR1101V2
//*
//* UPDATE EIS/P&R MASTER FILE
//*
//UPDATE.INPUT  DD DSNAME=&&TRANS,
//              DISP=(OLD,DELETE),
//              UNIT=SYSDA
```

```
//PNRTST23 JOB WTI.C44.PO2154,'EIS/PER',T=4,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=WTI.C44.PO2154.MCMASTER.COMS.JCL
//*
//* TEST RUN 23 - RETRIEVAL
//*
//TEST23A EXEC PNWRETVR,
//             MSTRFIL=PR1101V2,
//             ANSWRFL=SEG3RTRV,
//             SERIAL=WTI111
//*
//* RETRIEVE GROUPS OF LINES FROM SEGMENT 3
//*
//COMPILE.INPUT  DD *
$$SELECT
LINE-NUMBER                        > '000'                            00000100
$$END
//TEST23B EXEC PNWPREPT,                                              00001300
//             MSTRFIL=SEG3RTRV
//*
//* PRINT ANSWER FILE
//*
```

```
//PNRTST24 JOB RTI.C44.PU2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CUMB.JCL
//*
//* TEST RUN 24 - RETRIEVAL
//*
//KILL  EXEC PGM=IEFBR14
//DD1   DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PU2154.MCMASTER.PNR.DATA.TRANS
//TEST24A EXEC PNRRETVR,
//              PARAM='SIZE=94K,BUF=10K,NOSEQ,SUPMAP',
//              MSTRFIL=PN1101V2,
//              ANSWRFL=PNRTEMP,
//              SERIAL=RTI111
//*
//* RETRIEVE ON STATE, COUNTY, AND PLANT-ID
//*
//COMPILE.INPUT  DD *
$$SELECT
STATE                                = '19'                               AND
COUNTY                               = '1280'                             AND
PLANT-ID                             = '0050'
$$END
//TEST24B  EXEC PNREFUPD,
//              MSTRFIL=PNRTEMP,
//              TRANS=SAVE,
//              DISP='NEW,CATLG,DELETE'
//EFUPDATE.INPUT DD *
72000 N
```

```
//PNRTST25 JOB RTI.C44.P02154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.P02154.MCMASTER.COMS.JCL
//*
//* TEST RUN 25 - MERGE TRANSACTIONS FOR UPDATING MASTER FILE
//*
//KILL  EXEC PGM=IEFBR14
//DD1  DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.P02154.MCMASTER.PNR.DATA.MERGE
//TEST25A  EXEC PNRTRNMG
//*
//* MERGE TRANSACTIONS
//*
//MERGE.FILE1  DD  DSN=RTI.C44.P02154.MCMASTER.PNR.DATA.SAVE,DISP=OLD
//MERGE.FILE2  DD *
1912800089005073006021560100601     0001248      63400000995                 21A
1912800089005073006021526                        A                           22A
1912800089005073006021542401000200000SU                                      23A
1912800089005073006021511101000100000SU                                      23A
1912800089005073006021542101000500000SU                                      23A
1912800089005073006021543101000400000SU                                      23A
1912800089005073006021542602000300000SU                                      23A
//MERGE.OUTFILE DD DSN=&&MERGE,
//             UNIT=SYSDA,
//             DISP=(NEW,PASS),
//             SPACE=(TRK,(10,5))
//TEST25B  EXEC PNRISORT
//*
//* ENSURE THAT TRANSACTIONS ARE SORTED CORRECTLY
//*
//SORT.PNRINPUT  DD DSNAME=&&MERGE,
//             DISP=(OLD,DELETE)
//SORT.OUTPUT  DD UNIT=DISK,
//             DISP=(NEW,CATLG,DELETE),
//             SPACE=(TRK,(10,5)),
//  VOL=SER=RTI111,DSN=RTI.C44.P02154.MCMASTER.PNR.DATA.MERGE
```

```
//PNRTST26 JOB RTI.C44.PO2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.COMS.JCL
//*
//* TEST RUN 26 - UPDATE MASTER FILE
//*
//KILL  EXEC PGM=IEFBR14
//DD1   DD UNIT=DISK,DISP=(OLD,DELETE),
//  VOL=(SER=(RTI111,RTI222)),
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.PR110476
//TEST26  EXEC PNRFUPDT,
//              OLDMSTR=PR1101V2,
//              NEWMSTR=PR110476
//UPDATE.INPUT  DD DISP=OLD,
//  DSN=RTI.C44.PO2154.MCMASTER.PNR.DATA.MERGE
```

```
//PNRTST27 JOB RTI.C44.PU2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CDMS.JCL
//*
//* TEST RUN 27 - RETRIEVAL
//*
//TEST27A EXEC PNRRETVR,
//             MSTRFIL=PR110476,
//             ANSWRFL=PNRTEMP,
//             SERIAL=RTI111
//*
//* RETRIEVE ON STATE, COUNTY, AND PLANT-ID
//*
//COMPILE.INPUT  DD *
$$SELECT
STATE                             = '19'                             AND
COUNTY                            = '1280'                           AND
PLANT-ID                          = '0050'
$$END
//TEST27B EXEC PNRPREPT,
//             MSTRFIL=PNRTEMP
//*
//* PRINT ANSWER FILE
//*
```

```
//PNRTST28 JOB RTI.C44.PO2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* TRANSACTION GENERATOR USING MODE 'A'
//*
//TEST28  EXEC PNREFUPD,
//              MSTRFIL=PR110476,
//              EFTABLE=NEWEFTBL,
//              TRANS=NEWEF
//*
//* GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
//*
//EFUPDATE.INPUT  DD  *
72000 A
```

```
//PNRTST29 JOB RTI.C44.PU2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PU2154.MCMASTER.CDMS.JCL
//*
//* TRANSACTION GENERATOR USING MODE 'T'
//*
//TEST29  EXEC PNREFUPD,
//             MSTRFIL=PR110476,
//             EFTABLE=NEWEFTBL,
//             TRANS=NEWEF
//*
//* GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
//*
//EFUPDATE.INPUT  DD  *
72000 T
```

```
//PNRTS129 JOB RTI.C44.PO2154,'EIS/PBR',T=03,PRTY=0,FORMS=WHITE,P=250
     ***PROCLIB=RTI.C44.PO2154.MCMASTER.CONS.JCL
     ***
     *** TRANSACTION GENERATOR USING MODE 'I'
     ***
//TES129  EXEC PNREFUPD,
               MSTRFIL=PR110476,
//             EFTABLE=NEWEFTBL,
//             TRANS=NEWEF
//
     ***
     *** GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
     ***
//EFUPDATE.INPUT  DD  *
IEF142I - STEP WAS EXECUTED - COND CODE 0000
EFUPDATE CORE=100K TIME---0:09.2    UR---111  RD/WR---0:00.0    RC-----0
EFUPDATE USED=100K  CPU---0:00.4  DISK---500  REWND---0:00.0
EFUPDATE             I/O---0:08.8  TAPE-----0  FL SR---0:00.0

PNRTS129 TIME---0:09.5
```

```
//PNRTST30 JOB RTI.C44.PO2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154,MCMASTER.COMS.JCL
//*
//* TRANSACTION GENERATOR USING MODE 'X'
//*
//TEST30  EXEC PNREFUPD,
//              MSTRFIL=PR110476,
//              EFTABLE=NEWEFTBL,
//              TRANS=NEWEF
//*
//* GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
//*
//EFUPDATE.INPUT  DD  *
72000 X
```

```
//PMRTST31 JOB RTI.C44.PO2154,'EIS/P&R',T=03,PRTY=0,FORMS=WHITE,P=250
//*PROCLIB=RTI.C44.PO2154.MCMASTER.CDMS.JCL
//*
//* TRANSACTION GENERATOR USING MODE 'N'
//*
//TEST31  EXEC PMREFUPD,
//             MSTRFIL=PR110476,
//             EFTABLE=NEWEFTBL,
//             TRANS=NEWEF
//*
//* GENERATE TRANSACTIONS TO UPDATE EF INFO IN MASTER FILE
//*
//EFUPDATE.INPUT  DD  *
72000 N
```

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